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HELP ME?

GAME GRADS IN CRISIS

FIND OUT HOW WE CAN GET MORE PEOPLE INTO GAMES

INSIDE ▸ DESIGNING FOR ESPORTS ▪ STUGAN ACCELERATOR ▪ MOBILE TOOLS ▪ GUILDFORD FOCUS

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develop

ISSUE 164 SEPTEMBER 2015

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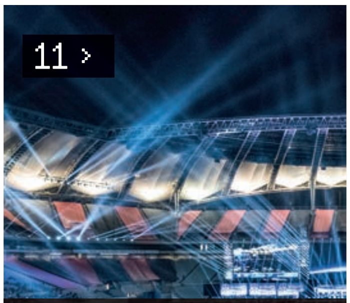
HOW CAN WE GET MORE PEOPLE INTO GAMES?

As graduates and other aspiring developers struggle to start their careers, Develop investigates the lack of studios offering work experience, internships, and apprenticeships – and takes action to help



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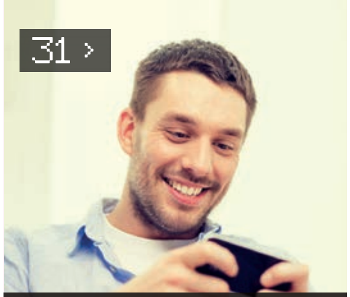
Inside the Swedish accelerator



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EDITORIAL

NURTURE OUR NEW TALENT

I WOULD NOT be where I am today were it not for work experience.

A two-week internship became seven weeks, which then turned into a two-day-per-week placement during my final year of university. This grew to an unpaid part-time position until I was finally brought on full-time a few months after I graduated.

The students knocking on your door hold the same potential – if only they can find a place to get started.

In Craig's excellent investigation over the page, he lists the many reasons why devs might not be able to offer work experience and internships: time, resources, confidential informational. But these are hurdles, not walls – they can, and should, be overcome.

We live in a wonderful age where anyone can develop games, but it is still the established studios and developers that newcomers and start-ups look to for inspiration and guidance. Mike Bithell didn't make his millions after a couple of pet projects – he learned his craft at Blitz and Bossa.

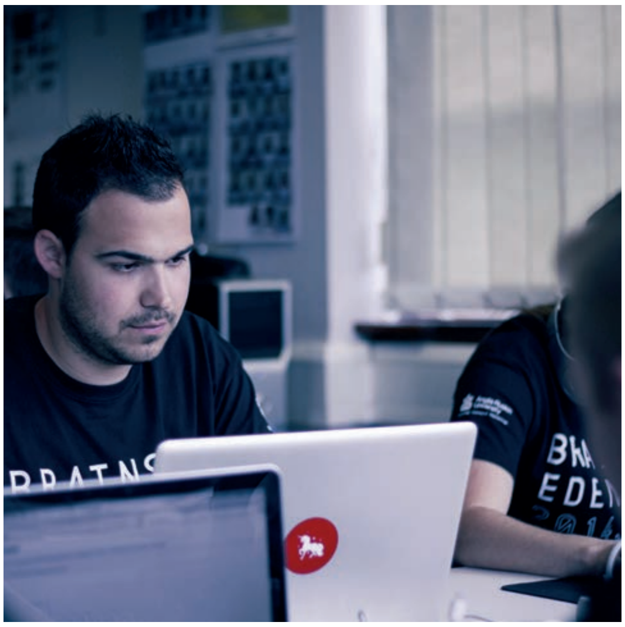
The point is there's no telling how successful those graduates could become if they received a little guidance. I know I remain indebted to my first employer, and you can bet future devs will be just as grateful to you.

Look at it from another perspective: all studios, no matter their size, demand experience from their applicants when filling new roles. Everyone can make a game, yes, but you want the ones who can make them well. But how will you find new recruits with experience if no one gives them the chance to gain some?

James Batchelor
jbatchelor@nbmedia.com

How can we get more people into games?

Games development is more accessible than ever, but getting a foot in the studio door is much tougher. **Craig Chapple** investigates why so few aspiring developers are getting a chance, and what can be done to support talented students



A REPORT CONDUCTED by Creative Skillset earlier this year revealed that just 21 per cent of people in the UK games industry have undertaken work experience prior to entering the sector.

This is lower than any other sector in creative media, which has an average of 41 per cent.

The striking figures pose an important question: Is enough being done to support aspiring games professionals?

The reasons for not doing so are varied: the difficulties of providing work experience for under 18s due to UK laws; tough deadlines; office space; NDAs; and microstudios lacking the capacity to take interns.

I personally spoke to several students at this year's Dare Protoplay in Dundee, a competition that brings teams of aspiring devs together from their respective universities to make a game – a great way of obtaining experience. While they praised Dare as a great addition to the CV should they look for work, many discussed the difficulties of obtaining studio placements. This is then confounded by the requirement for experience in many job roles.

One claimed that a classmate, upon being unable to find any work experience, or later a job in games, left for a completely different industry.

Develop also contacted other students and graduates across the country to give us their experiences. One, who asked to remain anonymous, said that in Wales the situation is "a nightmare", with no opportunities for work.

"A week working in a studio would have been a massive help for us as students," he said. "It would probably be an inconvenience for the studios, though."

Another student who studied in London, a key tech hub, said the situation there was no better.

"We were told about the importance of networking but there haven't been many opportunities," he said.

Another, who left studying games for an industry with more opportunities, said if more work experience had been offered, he may have been more invested in his degree. Ex-University of Abertay student Jaime Cross, who now works at Team Junkfish, said there are a few opportunities out there for people in audio, but not necessarily for making money off of or getting a full-time job.

> **"In audio your only shot at a full-time role is starting your own company."**
>
> Jaime Cross, Junkfish

"There are plenty of ways to build up a portfolio and show you can work in a freelance capacity – even if the rates aren't great for some things – but your only shot at a full- time audio role here is starting your own company," he said.

ACADEMIC INITIATIVE

Some universities have been helping to alleviate the challenge these students face. Sheffield Hallam runs its own internal studio, Steel Minions, that makes commercial games, such as the recent PS4 title *PieceFall*.

The university's senior lecturer in Game Development Jacob Habgood admits it's not easy for studios, who may find the idea of 'carrying' a placement student less appealing with deadlines to meet, but thinks more can be done.

"Studios need to soften their attitude a little – it has certainly paid off for Sumo," says Habgood. "They generally take a couple of Hallam's students every year now. A very high proportion of those students go on to be employed by Sumo when they graduate, so they must have impressed."

Sion Lenton is a lecturer at universities including the National Film and Television School, who has also held roles at Sega and Codemasters. He says in his experience if someone shines during work experience or an internship, studios would snap them up, resulting in what's usually a safe hire.

He admits there's a cost to studios – such as paperwork and interviews, while also sucking up the time of staff. But the benefits can outweigh the costs.

"Anything you can do to help find that potential code ninja or the artist that can turn out any style quickly, is a

// MEANWHILE ON DEVELOP-ONLINE.NET

Why Double Fine, Obsidian and InXile are joining new crowdfunding site Fig
deve1op.net/1fmN8zp

How the EU can prevent VATMOSS from killing indie developers
deve1op.net/1fkijv9

Tommy Palm: 'Virtual Reality needs mainstream content to succeed'
deve1op.net/1Em1iNn

bonus," he states. "Maybe more devs need to look on it as an opportunity to safely and cheaply discover new talent as opposed to it being a chore or an impediment to their efficacy or an expense they don't need."

STUDENTS VS STUDIOS

While some studios do offer chances for aspiring devs to get a taste of the sector and studio life, there's another problem.

Stats provided by Creative Skillset show that in 2014, 60 universities and colleges offered 215 undergraduate and 40 master video game courses. The most recent stats available, courtesy of the Higher Education Statistics Agency for the 2012/2013 academic year, show that 3,125 students were taking games as a subject of study.

Compare this with the 620 studios in the UK, according to TIGA, and you can see the difficulties studios face when lending experience in such a highly competitive field. Lenton says a local studio in Leamington Spa, which houses around up to 300 staff, recently had over 1,000 applications for a dozen places. It's a situation Creative Assembly also faces with its own placement scheme.

"The difficulty from our perspective is that there are more people interested in working here than we can fit into the studio," says HR business partner Emma Smith. "We actively promote games as a career option via our Legacy project and other avenues where we have a platform to shout about what we do as a studio, and I believe that the majority of studios are just as proactive as we are."

Smith adds that young devs should be looking events to get experience, and making their own apps.

But not everyone can jump into indie development. Working with professionals on a live project has the potential to be invaluable, and it's something studios don't offer enough of.

"Work experience helps prepare people coming out of university for a proper dev environment," says Team17 creative manager Kevin Carthew. "There should be more of it, and it'd certainly do more good than harm.

"The main difficulty is in finding people. Services like Creative Skillset's trainee finder do help with this, but from my experience I think universities could do a little more. I'd like to see more of them proactively contact studios about working together."

Even for those that do offer traineeships and internships, visibility is another issue. There are, of course, great initiatives by UKIE, Creative Skillset and Next Gen Skills Academy, to name a few, but more needs to be done to increase awareness.

"What studios have available to people at internship placement and work experience levels, are a little bit shrouded in mystery," admits Jagex talent acquisition specialist John Chalkley.

"It's common that I speak to people already in the industry that have a limited understanding of the studios even in their local area. Obviously that's why people go to agencies when they're looking for work because it's hard to find a centralised resource to say these companies are offering this."

It's clear more effort is needed to connect students and universities with games studios, and *Develop* is keen to help (see below).

The industry can do more to get more people into games. It's time we did. ■

> ***"There are far more people interested in working here than we can possibly fit into the studio."***
>
> Emma Smith, Creative Assembly

ONE-STOP SHOP

To help students find work experience opportunities around their area, and to support studios with promoting such programmers, we're setting up a web page listing all available vacancies.

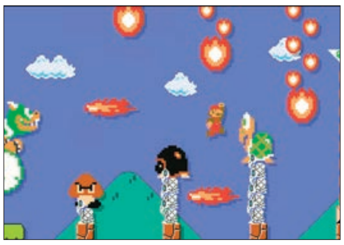
It's completely open and free to any studios offering work experience opportunities, apprenticeships, traineeships, internships and any related programmes supporting students and graduates.

We just need your company name, location, what opportunities you have in what roles, the dates these programmes run and a contact.
Email Craig Chapple at cchapple@nbmedia.com to take part.

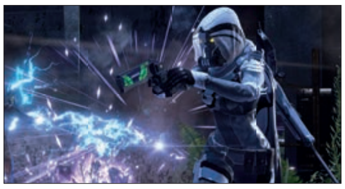
DEVELOP DIARY

Your complete games development events calendar for the months ahead

AT A GLANCE



SEPTEMBER 11TH
Super Mario Maker
Unleash your inner Miyamoto, and weep at the crazy levels made by others.



SEPTEMBER 15TH
Destiny: The Taken King
There are only so many times you can cheese your way through Crota's End.

SEPTEMBER 15TH TO 28TH
The apocalypse (cancelled)
NASA promises a meteor will NOT hit Earth during this time. Phew.

SEPTEMBER 16TH
The Develop Quiz
Think your studio is the smartest? Come on down and prove it.

SEPTEMBER 19TH
Talk Like A Pirate Day
Because people 'arrrr' still insisting this is a real thing.

SEPTEMBER 29TH
LEGO Dimensions
Back to the Future, *Doctor Who*, *The Simpsons* and *LEGO*? Bye bye money.

DIARY DATES

Develop Live
October 7th
Pinewood Studios, UK
www.develop-live.com

SEPTEMBER

GAMES IRELAND GATHERING
September 10th
Dublin, Ireland
www.gig2015.ie

DEVGAMM HAMBURG
September 10th to 11th
Hamburg, Germany
www.devgamm.com/hamburg2015/en/

GAME MUSIC CONNECT
September 15th
London, UK
www.gamemusicconnect2015.com

THE DEVELOP QUIZ
September 16th
London, UK
khumphrey@nbmedia.com

UNITE BOSTON
September 21st to 23rd
Boston, USA
www.unity3d.com/unite/boston

OCULUS CONNECT
September 23rd to 25th
Hollywood, USA
www.oculus.com/connect

OCTOBER

GAMES MEDIA AWARDS
October 14th
London, UK
dopeyokun@nbmedia.com

GAMES FUNDING FORUM
October 15th
London, UK
www.gamesfundingforum.co.uk

EVENT SPOTLIGHT

GAME MUSIC CONNECT 2015

ONCE AGAIN DEDICATING an entire day to the realm of video game music, Game Music Connect returns to London this month.

Held in the Purcell Room at London's Southbank Centre on Tuesday, September 15th, the conference is the brainchild of multi-award winning composer James Hannigan and game audio director, composer and *Develop* columnist John Broomhall.

This year's event kicks off with a rare keynote from SCEA's Chuck Doud, Sony, responsible for the music of *The Last of Us* and *Uncharted*.

There will also be world premieres of the work by Sony's Project Morpheus music team and a screening of selected footage from music documentary Beep.

Other speakers include the *Alien: Isolation* sound team and Spitfire Audio.

> ***We're excited to welcome a vibrant and diverse line-up of star guests.***
> James Hannigan, Composer

"We're excited to welcome a vibrant and diverse line-up of star guests to explore and celebrate the amazing world of video game music," says composer and event co-founder James Hannigan.

You can find out more and book tickets by heading to www.gamemusicconnect2015.com. ■

COMING SOON

DEVELOP #165
OCTOBER 2015

- Experts reveal the key analytics all developers should be tracking
- Monetisation special: Make your game as lucrative as it is fun

DEVELOP #166
NOVEMBER 2015

- Our special Develop 100 issue ranks the world's top studios by sales, review scores and reputation. Also includes analysis of each developer.

For editorial enquiries, please contact jbatchelor@nbmedia.com
For advertising opportunities, contact cnangle@nbmedia.com

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Lead Environment Artist
Senior/Lead Character Artist
Senior/Lead VFX Artist
Environment Artists – Contract
Graduate Environment Artists

Engineering
Senior Rendering Engineer
Rendering Engineer - Contract
Senior Systems Engineer
Senior Tools Engineer
Graduate Engineers

Production
Producer

Design
Game Designer
Level Designer

Audio
Sound Designer – Contract

Variable declarations

//COMMENT: BUSINESS

Keeping it real

SuperData's **Joost van Dreunen** discusses creating authentic experiences in a digital world

Mojang Productions founder Markus 'Notch' Persson and YouTube celebrity PewDiePie both accrued massive audiences by remaining true to themselves, making them easier for gamers to connect with

THE SUDDEN RISE into the mainstream seen in indie development, cosplay, modding and gaming video content has re-energised the notion that users are in control.

As average people are responsible for a growing amount of available games and related videos, commentary, add-ons, upgrades and expansions, it seems appropriate to declare a new era of gamer-generated content. The market for gaming videos alone now generates $3.8bn.

User-generated content, however, is not new. Ever since media first moved away from an analogue, one-to-many model to one that is digital and many-to-many, amateur content creators have been sharing online.

What's new is that in a digital economy in which anyone can develop, publish and distribute content, fan economics are now becoming a viable business model.

Sure, we've heard it before that consumers are now producers, co-creators, or, worse, "pro-sumers". In this digital era, it should go without saying that an audience such as gamers, which busies itself with customising avatars and optimising character loadout, is particularly well-suited to create and consume.

In fact, it's a really old-fashioned way of establishing an emotional connection between players and a game, as anyone who's played pencil-based D&D can attest. An avatar is a miniature version of you, just like your *Pokémon* deck, your *Minecraft* universe and your *SimCity* all express who you are.

> ***"The rules that govern success are the same for big companies and newcomers alike: be yourself."***

This constantly growing online inventory of things to watch, listen to or play is hugely overwhelming. To navigate it and find the things you like, you need guideposts – markers that help you identify things that match your interests. A platform like Steam is continuously working on improving its algorithm to help you find games you'll like.

Another way to find the 'cool' stuff is following celebrities. The most obvious one is Felix Kjellberg (PewDiePie). The key to his success has been to simply remain true to himself. Case-in-point: his response to criticism following the revelation that he had earned $7.4m in 2014 was widely distributed as evidence of how truthful he was.

According to the Ross Miller over at *The Verge*: "Love it or hate it, his success – like so many YouTube personalities – isn't just in playing games but actually connecting with an audience. No agent, press release, or any other intermediary. He just hits record."

The real currency in this emerging gamer market is authenticity.

LEARN FROM THE PROS (BY NOT BECOMING ONE)

If you watched the EA conference during E3, you understand the power of authenticity. Following the usual blur of superlatives, all meticulously delivered by execs in Armani suits, an awkward static energy started to build up as the various company men insisted on referring to themselves as 'game makers'.

Understandably, a billion-dollar publicly traded firm wants to reduce the margin of error when presenting its top-level team to a live, international audience. And, in fairness, for many of them being a strong speaker in a corporate environment, able to help a large organisation see their vision, is more important than seeming accessible to consumers.

So it's no surprise that a flawless staccato of biz speak generates tension in a crowd of non-business folks. Deliberate or not, EA saved its press conference by switching to the modesty of the creative genius behind *Unravel*. It felt like a release from all the corporate electricity and, following this moment, *Unravel* became one of the most talked about non-triple-A games at E3.

GETTING OUT IS WHAT IT'S GOING TO BE ABOUT

When Microsoft acquired Mojang, most honed in on the $2.5bn it had been willing to shell out. These amounts make for great headlines and even greater industry gossip. But Markus 'Notch' Persson had other plans.

A statement on the company's site reads: "[Notch] has decided that he doesn't want the responsibility of owning a company of such global significance. Over the past few years he's made attempts to work on smaller projects, but the pressure of owning *Minecraft* became too to handle. The only option was to sell Mojang. He'll continue to do cool stuff, though. Don't worry about that."

To make 'cool stuff', even the most successful indie in the world needed to rid himself of the very thing that made him famous. In it, we find a lesson: as supply and demand for gamer-created content grows, the rules that govern success are the same for big firms and beginners alike: be yourself.

That's the type of entertainment I look forward to. ■

Joost van Dreunen is co-founder and CEO of SuperData Research, provider of relevant market data and insight on digital games and playable media.
www.superdataresearch.com

//COMMENT: INDIE

How The Escapists broke out

Debbie Bestwick explains the process of taking a $10,000 Kickstarter to a $10m global indie hit

EVER SINCE ITS huge success earlier this year, I am constantly being asked by my peers: "How did you spot the potential in *The Escapists*?" and "What did you do to break it into the mainstream?"

I'm not going to give away all our secrets, but here's a few invaluable tips on achieving commercial success with a brand new IP.

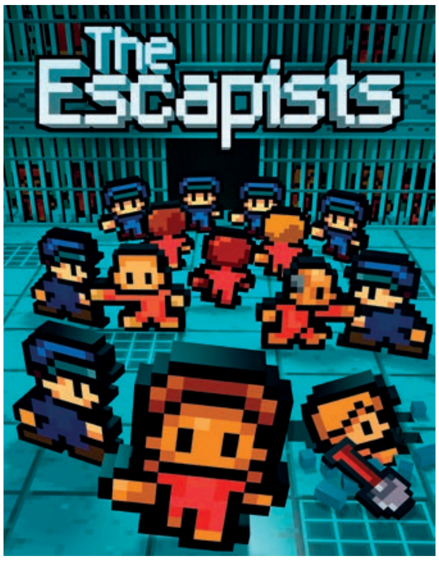
The very first thing to consider: Is the game different? Is it new? Does it make your mind race with ideas? Our strength is to help devs turn gems into commercial product that sells, so for us, it's always about the potential more than the polish. *Sheltered, This Is The Police* and *The Escapists* are all examples of games where we were more excited about what they could become rather than what was presented to us at the original pitch.

There is too much choice and too many options for people to play. YouTubers, streamers and influencers don't look for "me too" titles and so it's vital the game has something unique.

Another key factor is having a team with the right personality. Anyone can have an idea right? But do the team have the right spirit and passion and do they have a strong vision of where they want to take the game?

Both the game and the studio need to be able to engage the community. One of the key things that helped to grow the popularity of *The Escapists* was the fact that we were able to engage with the community right from the outset. We shared in their experiences and stories from the game, and their feedback was invaluable in helping to shape the game. You could argue that this is only the reserve of games that are released in Early Access, but that's not the case.

Finally, make sure there is a strong and solid development roadmap to support the game. Releasing it might seem like the finish line for guys who have put everything into the game for months or years, but more often than not it's only the beginning.



Team17's Debbie Bestwick says one of the pillars to The Escapists' success is the team's ability to engage its community from the beginning, letting players share their unique prison break stories

Even by taking these tips on board, there is still no guarantee of success. Whilst a great game will not always sell – and we have all seen some incredible games fail to live up to their potential – a bad game will never sell, no matter what you throw at it.

BE FEARLESS

Obviously the creation of a great game isn't a one-way street so it's important for developers to always put their best foot forward in getting their projects out there. Here's a few bonus tips just for you guys.

Firstly, how do you have a great game idea? How do you make sure your game fulfils that awesome potential? Simple: don't compromise. If there is something in your design plans you are even slightly worried about, bin it. Don't be afraid to ask fellow game makers their opinions too – we're a very friendly bunch in the games Industry who want nothing more than to see everyone succeed.

Do not fear competitor products – in fact, embrace competition. After all, what is competition? If you're worried about one or two similar games, what chance have you got when there are literally thousands of indie games being released? Indie titles need visibility and whilst it's true that the cream rises to the top, there is no harm getting a helping hand from your peers.

When we see cool things in the marketplace, we retweet, we share, we tell the world what's going on, and hopefully if developers see cool things you/we are doing, they return the favour. It's about turning a negative into a positive and getting the game above the parapet using all the resources at your disposal.

As your game idea starts to take shape and reach its potential, you need to make both you and your game visible to the outside world, show the world who you are and, almost as importantly, why you are making the game. Your personal story is an important factor in making people want to know more about your game and follow its progression through development.

The indie landscape continues to evolve at a staggering pace as production values continue to rise and more than ever new and innovative games are being made by talented teams. The more that we can do as a label to help bring these games to market, the more we'll see success stories about sustainable self-owned teams owning their IP – which, let's face it, is long overdue. ■

Debbie Bestwick is CEO and one of the founding members of Team17. She pioneered the compnay's leap into digital publishing.
www.team17.com

//EXTRA CONTENT ONLINE

"I think they very quickly realised I wasn't dying. I wasn't having a heart attack or anything, I'd basically had too much Red Bull."

How Mike Bithell's never-ending crunch sent him to hospital

deve1op.net/1hM7ST3

"If you haven't tried virtual reality then talk of 'immersion', and 'presence' means nothing."

The reality of marketing a VR game in a 2D world

David Corless, nDreams

deve1op.net/1Pz9Cdq

"Everything in a game can be quantified by what the team want to do and what the engine can handle. Finding a middle ground is crucial."

The life of a games animator

Harvey Newman, Lionhead

deve1op.net/1JkL1rZ

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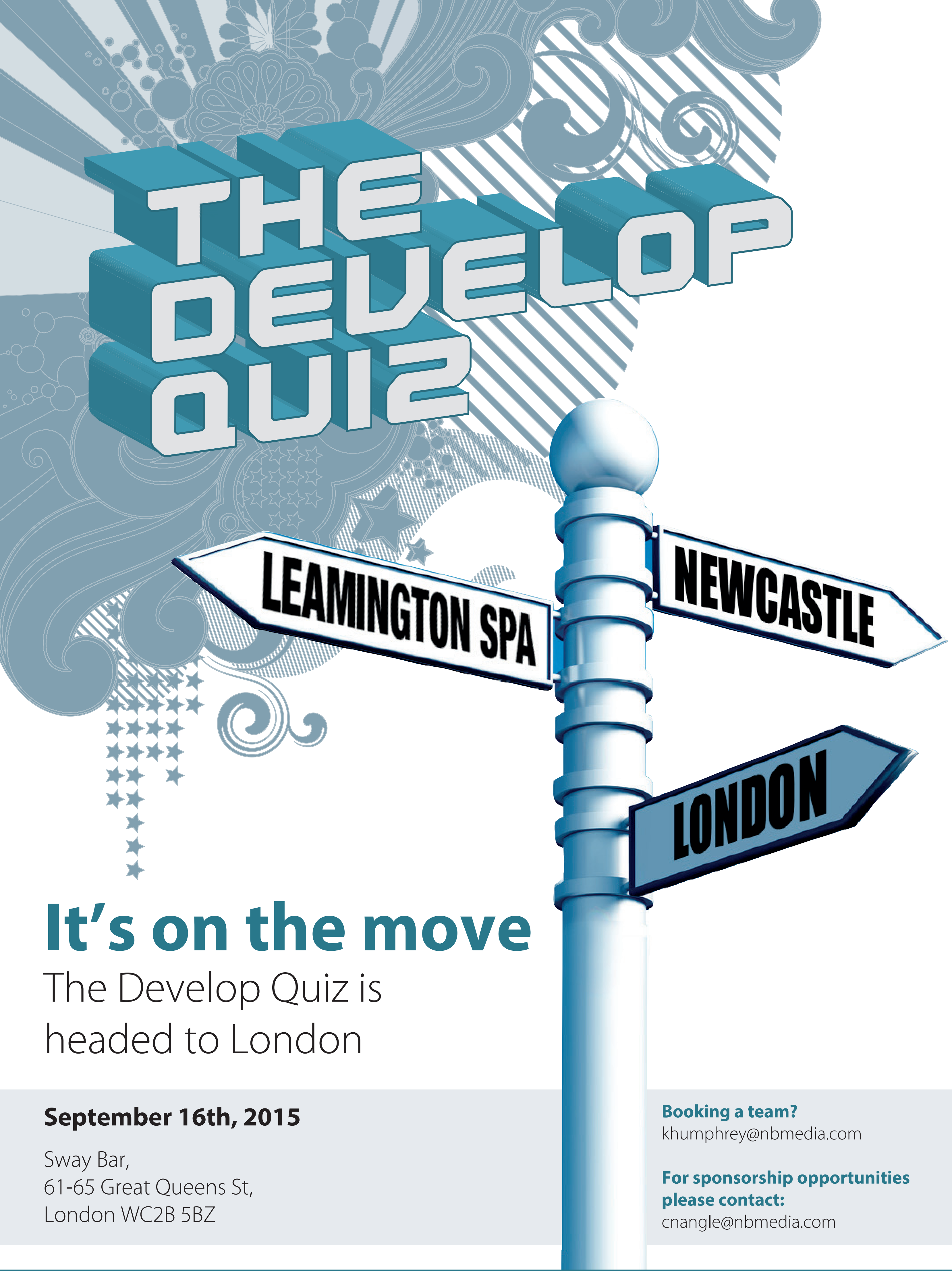
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It's on the move

The Develop Quiz is
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September 16th, 2015

Sway Bar,
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Booking a team?
khumphrey@nbmedia.com

For sponsorship opportunities please contact:
cnangle@nbmedia.com

Find your nearest quiz at: **www.develop-online.net**

INSIDE STUGAN:
Develop visits the small Swedish development camp to see how it's helping new studios
P16

A GAME OF THRONES:
We uncover the story behind Bigpoint's big new online game
P21

REGION FOCUS:
We chat with the key developers in Guildford about why it remains such a vibrant dev hub
P22

A design on eSports

Developing a game for eSports can be a daunting prospect. To give you an idea of the scope, experienced developers in the competitive gaming space speak to **Craig Chapple** on how to design a game for professional players

COMPETITIVE GAMING HAS come of age and it's now becoming an increasingly significant part of the games industry.

The headline eSports games – *League of Legends*, *DOTA 2*, *Counter-Strike* and *World of Tanks*, to name a few – attract millions of casual spectators and adoring fans.

In fact, *League of Legends*' 2014 World Championship attracted some 27 million viewers last year. That's a level on par with, and exceeding, some of the top physical sports in the world.

And the biggest tournaments can generate massive prizes for their competitors. *DOTA 2*'s prize pool for The International 2015 was more than $18m, the *League of Legends* World Championship 2015 offered $2.1m, while Hi-Rez's *Smite* had $2.6m worth of winnings on offer.

But it's a tough arena to get into. As CCP's lead game designer Andrew Williams tells *Develop*, whose studio has eSports ambitions with its upcoming virtual reality space combat game *Eve: Valkyrie*, "you don't make an eSports game, eSports picks you".

> ***"It's really hard to convert an existing game into an eSports title without compromising it."***
>
> Greg Street, Riot Games

BUILDING FOR THE MASSES

But that doesn't mean of course that developers shouldn't design their game with competitive play in mind. In fact, it's crucial. Riot Games' Greg Street, design director on perhaps the world's biggest game, and most popular eSports title, *League of Legends*, says developers need to keep it in mind right from the beginning.

TaleWorlds' Frank Eilliott believes Twitch is a key factor behind the rise of eSports, as well as the personalities of professional players which fans can become attached to

Riot Games' Greg Street, design director on League of Legends (right), believes the 'secret sauce' any popular viewing sport – eSports or otherwise – is that spectators can enjoy it at multiple levels

35
39:35
30
SECRET SHOP
Orb of Venom 275
Ring of Health 875
Void Stone 875
Energy Booster 1000
Vitality Booster 1100
Point Booster 1200
Hyperstone 2100
Demon Edge 2400
Mystic Staff 2700
Reaver 3200
Eaglesong 3300
Sacred Relic 3800
RING OF HEALTH
875
+5 HP Regeneration
TIDEHUNTER
2373 / 2373
966
SHOP

"It's really hard to convert an existing game into an eSports title without compromising it and potentially alienating players with the kinds of changes that would entail," he states.

"For example, it's easy to design a multiplayer game in which the players move and fight each other at a high speed that feels fast-paced to participating players, but is really hard for viewers to be able to follow. Yet slowing a game down once it has gone live would be really hard on an existing player base.

"As another example, if you make a playing field with a lot of nooks and crannies, you're giving up on any hope of a third-person camera that hovers over the entire playing space. Just being able to tell who is ahead and behind can be challenging if it isn't designed upfront with that intent."

Wargaming global head of eSports Mo Fadl warns however that developers can't design a game solely for eSports.

"It has to be an awesome game to begin with," he says. Fadl explains that some of the biggest eSports games today were not designed directly for that purpose, but rather their following and intense competition that emerged amongst avid players who clamoured for such a platform.

Using the example of *World of Tanks*, he says the company started slowly, beginning with smaller tournaments while planning for the future. Eventually it brought on a team of professionals to mould how its eSports scene would work, rather than jumping straight into the Grand Finals.

"It takes a huge amount of time and planning," stats Fadl. "I think it's simply not possible to start a game with its sole purpose being eSports. You're setting yourself up for a great fall. Just focus on delivering the best multiplayer experience you can.

"You can keep eSports in mind. A lot of devs are creating games that want to be eSports staples – it makes business sense. That doesn't mean they all will be. It's about taking things slowly. Don't force it on your community."

At the core of a successful eSports scene are the professional players. These superstars, like in other professional sports, are increasingly taking the headlines, and their ability can attract thousands, or even millions, to watch their matches and tournaments.

THE RIGHT BALANCE

But developers can't forget the amateur players, of course, which will make up the majority of a game's userbase. So how do you address the balance of making a game accessible for amateur players playing just for fun, while professionals can climb the skills ladder and keep improving when playing full-time, perhaps for years?

> ***"It's not possible to start a game with its sole purpose being eSports. You're setting yourself up for a fall."***
>
> Mo Fadl, Wargaming

Street says that one way to make the game appeal to both areas is by having a long, if not endless, skill curve.

"The skill floor for new players can be pretty low, so that they feel like they can get into a game and actually accomplish something, but they may play hundreds of games and still find that new ways to improve their play," he explains.

"Even League pros can usually analyse their matches and identify areas where they made mistakes or could perform just a little bit better.

"Part of the secret sauce of any popular viewing sport – eSport or otherwise – is that viewers can enjoy it at multiple levels. For *League of Legends*, a relatively novice viewer can still understand what is happening when hitpoint bars start to go down and turrets fall, but then more hardcore viewers can obsess about item picks, spell cool downs and ward placement. Very engaged viewers know the pros and their play styles as well as the champions."

Frank Elliott, PR manager at *Mount & Blade: Warband* developer TaleWorlds, believes one key aspect of making a game interesting for both amateur and professional players is to push reaction-based decisions. He explains that as long as there is enough variety and scope in the decisions players can make, and it pushes their reactions hard enough, a game will be hard to master.

To provide a welcoming experience for new players who could get overwhelmed, meanwhile, Elliott says the studio encourages newcomers to face players of similar skill.

"If you make your game sufficiently complicated, then at a low skill level it's going to be kind of random because people aren't going to be playing well enough," he explains.

"In our game, if you attack other newcomers as a very early player, you'll get rewarded for that. So if your game is sufficiently complicated in a way that people will be vulnerable, and you can have some fun at the start immediately, you can get some success immediately."

PROFESSIONAL PRECEDENCE?

Though all kinds of players are important to cater for, does one skill level take precedence in game design over the other? Elliot says he leans towards professional players, but admits more experienced developers may say both.

"I think you have to make sure the game will always be valuable for professional players because otherwise they'll reach a cap and it'll break the bubble of your game if they can't keep progressing," he states. "You have to design around the professional players, and then find ways to make it playable for the amateur players."

Fadl says, however, it's important that all players are considered during development. He explains that studios shouldn't segregate their audience, as everyone comes from an

amateur position, whatever the game they are playing.

The learning curve then, should be gradual and engaging. Citing the example of *World of Tanks*, he explains how important it is to have tiers and matchmaking that puts players against others of a similar skillset, which can then help them improve while also enjoying the game.

For the jump to the competitive space, Wargaming has looked carefully at the process of climbing the ladder from amateur to professional.

"This has helped us create our eSports infrastructure 2.0." he says. "We're specifically concerned with how players make the leap to professional eSports athletes, and have streamlined the process. Accessibility is key for us. It's key for any eSports game. If there's a high threshold for joining, then people will not want to play.

"Infrastructure 2.0 makes it easier than ever for players to start their journey through our leagues. They can form a clan, enter competitions and work their way up the ladder. If you're in the Gold Series, you can be subsidised for playing on top of your competition earnings.

"We've invested millions into the scene and think of both sides of players when creating content. New competitions, maps, and vehicles – they complement players from any background."

Street agrees that, on the assumption a game needs to be at least a moderate commercial success, it must have a decently wide appeal.

Amateur players need to find it fun, he says, and believes part of what makes *League of Legends* so successful is how players can watch a competitive game, and be inspired to replicate strategies and play styles themselves in their next game.

There are still other key considerations to keep in mind, however.

"It is worth pointing out that the more skilled players, and especially professionals where so much is at stake, are the best at breaking your game as they'll be better at exploiting balance problems," Street explains.

"And the pros are also trendsetters, meaning those balance problems may soon trickle down to amateur play as well. You can't just balance a game just for the pros, but you need to be prepared to react to what they are doing."

PLAYER SUPPORT

It seems then, while accessibility is an important pillar for any game to be successful, professional players are invaluable in raising the profile of a game, as well as improving on its design.

> ***"Pros are trendsetters, meaning those balance problems may soon trickle down to amateur play."***
>
> Greg Street, Riot Games

Marcel Menge, MD of Turtle eSports Technology – which runs the Electronic Sports League, the biggest organisation in competitive gaming – is a big believer in supporting professional players. He says pros can help balance a game and discover potential abuses.

With this in mind, he says developers should invite these players in early during the development process, and let them participate in Alpha and Beta stages. And it's not only here developers need to take heed of their opinions.

"Their feedback is valuable and often makes sense, but as a game developer it is important to not forget the casual players in the process and balance the playing experience for the different groups of players," says Menge. "After the game is launched it is important to track how the best users playing the game and try to balance it for them, as they will get the most out of it and the normal players will profit from that as well.

"Also it is good to establish a direct way for communication between the professional players and the development team or a community manager, to make sure that game breaks are reported early and also to have an ongoing discussion with the pro players about the further development of the game."

LIVING THE STREAM

One of the most important parts of the eSports scene are videos and broadcasting on popular websites such as Twitch and YouTube. These streams and recordings can attract hundreds of thousands, if not millions of spectators around the world, and are arguably the biggest driving force behind eSports' dramatic growth during the last few years. And given their popularity, this will only continue.

Wargaming's Mo Fadl says streamers are so important to World of Tanks' success as an eSport that the studio does what it can to support match broadcasts

RIOT GAMES' TOP ESPORTS TIPS

There are many considerations developers need to be aware of when designing a game that's meant to be played competitively. Greg Street, design director on *League of Legends* at Riot Games, shares some key advice from his experience on the wildly popular game:

- The pro personalities can be really important to the viewer or player experience. There was a huge surge in golf participation in the Tiger Woods era and a lapse in amateur tennis in recent years, which some people believe is a direct response to male pros with somewhat low charisma.

- Length of game is important, particularly as a scheduled event. While [mixed martial arts fighter] Ronda Rousey can get away with it, viewers generally want to watch an engagement that lasts more than a few minutes, but doesn't drag on for hours.

- Viewers need to be able to orient themselves on the map to know what they are looking at. This is particularly true for video games that can have a lot of camera jumps from location to location. Giving viewers visual cues helps a ton; don't just rely on a minimap.

- On *League of Legends*, we spend a lot of effort looking at game clarity. Part of this is affordance: does that spell look like a damage spell or a protective spell? But another part of it is just avoiding filling the screen with too many explosions at once, especially in a large team fight, which tend to be the most exciting moments of a game.

eSports tournaments are known for attracting thousands, or even tens of thousands, to live events across the globe

As TaleWorlds' Elliott eloquently describes eSports broadcasters: "they are eSports".

"eSports wouldn't exist without Twitch. It's the most important thing, and it's completely revolutionised the whole eSports scene and the community," he states.

"That scene wouldn't exist without Twitch. Without it, it's just a few players playing together.

"We use Twitch and then YouTube to stream games, have chat shows and so on. It's important for developers and the professional players to connect to their fans.

> ***"eSports wouldn't exist without Twitch. It's completely revolutionised the whole scene."***
>
> Frank Elliott, TaleWorlds

"You have players streaming themselves playing the game – that's how you then give players personality. That's what eSports relies upon: having players with personalities, that's what creates the storylines around eSports. Twitch has really enabled that in a big way."

Fadl concurs, and says the massive communities of such sites, combined with the ease of setting up a video or stream, which almost anyone with a computer can do, has driven eSports to new heights by empowering streamers and players.

AUDIENCE PARTICIPATION

It also provides a place for viewers to interact with the streamer in a live environment, which Fadl says offers a transparent way to broadcast, making spectators feel more connected and involved in the events they are watching.

These streamers are so important in fact, that Wargaming does what it can to support some popular streamers to ensure the matches are broadcast.

"For our events like The Grand Finals, we wanted to support our streamers as much as possible," says Fadl. "We set them up on a great stage, had fantastic equipment, awesome staff – we gave them an environment where they could do their thing unhindered.

"We had streamers shoutcasting, narrating the action, interviewing the crowds, breaking down the action. As part of our new eSports infrastructure we subsidise people who stream and create content that helps others learn about the game. We want to help streamers as much as we can. We believe they provide a great service to the eSports community.

"Developers should let streamers broadcast games, and communicate with them so that they can provide better content. We've given our community contributors super tester accounts and let them try out new tanks, because that's what the community wants. It's about working together to meet their needs and wants."

The world of eSports looks set to continue growing to new heights over the coming years as more developers and publishers look to get in on the action and promises of wealth, and more traditional broadcast channels, such as the Entertainment and Sports Programming Network (ESPN), air matches.

Though there is sense in the suggestion that you don't choose eSports, eSports picks you, there is a lot you can do to prepare your game for when that moment arrives. ■

KEEPING PLAYERS AND SPECTATORS ENGAGED FOR THE LONG-TERM

Making sure players keep coming back to play and watch is one of the biggest challenges facing games with ambitions to be an eSport. They can become quickly outdated and the public can lose interest if developers don't plan ahead to keep it fresh and exciting.

Marcel Menge, MD of Turtle eSports Technology, which runs the Electronic Sports League, says developers need to ensure new content is released regularly to keep players engaged and coming back for more.

"There should be new content to play and explore every couple months and bigger updates to the game on a yearly or bi-yearly base help to keep the community interested and will reactive players who might got bored," explains Menge.

"*League of Legends* and *DOTA 2* are perfect examples where regular small content updates – new heroes/champions – keep the community interested and bigger updates – *League of Legends'* yearly season update / *DOTA 2 Reborn* – will reactivate larger parts of the community."

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Cabin Fever

For eight weeks the Swedish forests have played unlikely backdrop to a game accelerator project set up by some of Sweden's most influential developers. **Will Freeman** heads deep into the woods to find out exactly what is going on

Top to bottom: Induction developer Bryan Gale and Prism designer Clint Siu

TURNING OFF THE last true road that leads to the cluster of cabins that make up the Stugan site, it's hard to believe anything like games development is taking place there.

Yet that is exactly what is happening. At the end of a gravel track, amidst a striking landscape shaped by copper mining near Sweden's industrial town of Falun, a number of rust-red huts are scattered through dense woodland. Encircled by vast, placid lakes, the cabins give their Swedish language name to the Stugan project, and inside their walls, hand-picked developers are working hard on building distinct new games.

At least, most of them are. Others are swimming in the lakes, eating local food on a jetty, or wandering deep in the forest alone. It's summer in Sweden, when the sun barely sets, and in the eerie evening light it's an undeniably beautiful spot.

And that's exactly why a non-profit games accelerator is taking place there. Or rather, it was taking place there. At the time of writing the inaugural Stugan has just concluded, and it is time for the developers to fledge the nest while the organisers look back at the project's achievements.

SHEDDING LIGHT

The Stugan concept was the brainchild of former King games guru Tommy Palm – famous for his role taking *Candy Crush Saga* to mobile, and now CEO of his own outfit, Resolution games – and Rovio Stockholm's general manager Oskar Burman. There's been ample input and sponsorship from others too, from Avalanche's founder and CCO Christofer Sundberg to Mojang's business development specialist Daniel Kaplan. Alexander Ekvall, previously of King, is also a founder, while Jana Karlikova stands as the project's manager.

And for all involved, the idea of Stugan came from wanting to give back to an industry and creative space in which they'd flourished. For Burman, in particular, though, the idea was a long-held concept, itself born in one of those cabins.

> ***We don't have any commercial demands on the games that we're looking for.***
>
> Tommy Palm, Resolution Games

"My first professional game I ever created was indeed partly created in one of those Swedish cottages during the early '90s, as me and friends spent weekends and summer breaks creating the Atari ST first-person shooter *Substation*," he explains.

"The focus and inspiration we found out there was special, and since then the idea of gathering developers out in the forest has stuck with me."

However, it wasn't until the recent indie revolution that Burman finally had his chance to make that idea tangible. And as it happened, Palm had been pondering similar schemes, himself inspired by both contemporary game accelerators and Andy Warhol's influential collective New York studio space The Factory.

"Really we just kind of merged our ideas, and that's how it came about," states Palm.

It was decided to invite 15 teams from all over the world to join the Stugan, which would be defined by a non-profit structure. The teams would bring games in various states to Falun's countryside, and spend eight weeks in rural isolation working on those games, while digesting the insights of a stream of visiting mentors.

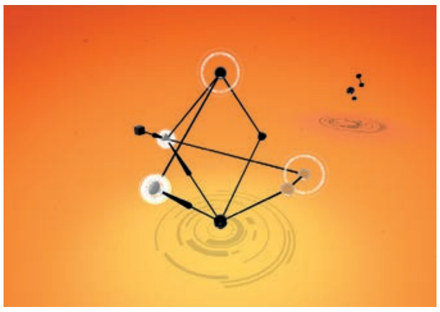
"One thing that makes Stugan different, I think, is that we don't have any commercial demands on the games that we're looking for," Palm muses. "That allows us to be a little bit more open in what games we can have at Stugan. Most accelerators would take apart a game and look for what they thought was commercially viable, whereas at Stugan we don't need to worry about that, so we can take more risks."

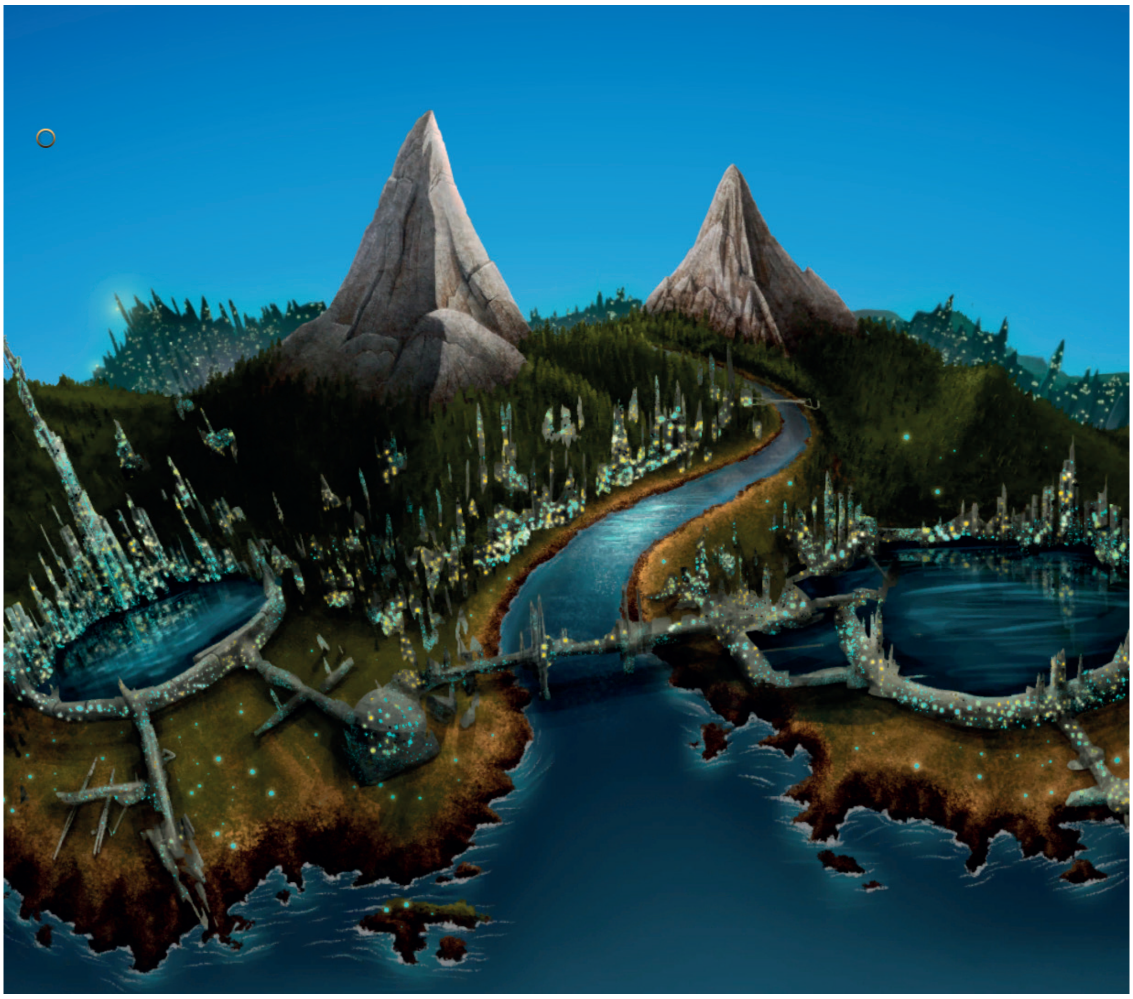
It's a model so free from cares about convention it was bound to attract its critics. A few of social media's less kind observers were quick to paint a picture of Stugan as a place harbouring privileged hipsters sipping craft beers as they strolled through woodland concocting pretentious game concepts. But could that be the case?

STUG LIFE

Visiting Stugan, in fact, reveals a rather different ideal. Certainly as accelerators go, it is distinct, yet not wilfully unusual. The developers involved are a largely youthful

She's upstairs





bunch, picked for their individual approach to games making, but they are not by default hipster contrarians. Most are building a game that they hope will thrive and dazzle diverse audiences like any successful game, and a number of the titles respect genre conventions conservatively.

But being at Stugan isn't just a place where the developers toil at desks. And visiting the site also means getting involved. It's a place about contribution and collaboration, meaning even a passing journalist is also there as a mentor and a speaker, and expected to meet the initiation ritual that is swimming in those lakes.

Back on dry land, its time to enter some of the cabins, and get a sense of what Stugan really is. A handful of rooms house several developers working on different projects in unison. Elsewhere walls are caked with Post-It notes as narratives are thrashed into shape, while beyond a kitchen a multiplayer testing session is underway.

What is immediately apparent is that the developers – who have affectionately branded themselves 'Stuganeers' – aren't sticking to the confines of their own development teams. Stugan has, in its short life engendered a community, and it very much feels like an accelerator where a group of developers are making a group of games as a single act.

"We're all in the trenches together, struggling and fighting to make our games happen," offers Clint Siu, who is working on his magnificently pretty puzzler *Prism* throughout Stugan.

"Besides giving technical help, we give each other moral support, which can be just as important.

"Having people around that can relate to what you're going through is really comforting and reassuring," he later adds. "I really, really want everyone's games to do well and be successful. Even though we only have two months here with each other, these guys are my friends for life now."

STUGAN SYNDROME

Then he finishes with a flourish that typifies the lively camaraderie emerging at Stugan.

"Stug life for life," he jokes, making a nod to Tupac Shakur's music that contrasts playfully with the lush rural surroundings.

> ***"Besides giving technical help, we give each other moral support, which can be just as important."***
>
> Clint Siu, Prism developer

And Siu isn't the only Stuganeer feeling the love of a good community.

"These are my first forays into the indie scene and it can be a little isolating," offers Simon Ashbery, lead artist and designer on *Rosvita*, a slick puzzle-platformer by the Rosvita Works team. "I've worked in the industry for a few years, but when you are a cog in a larger machine it can be hard to see the wider community. At Stugan I have found that community."

Made With Monster Love's Peter Cardwell-Gardner, whose game *Cadence* mixes rhythm action and puzzle elements to explore basic concepts of electronic music production, adds: "For me it's not so much that fact these people are game developers, as much as the fact that I'm getting quality time with real friends.

"That's a facet of modern life – interactions are ever more fleeting, and being a games developer doesn't help because you're already keeping a computer company all day. So from that point of view it's been great to just hang out and laugh at times."

It's a similar story for Laura Stokes, who with teammate Izzy Gramp is working on adventure game *Intergalactic Space Princess* as Geeiz Games; a studio with much to gain from Stugan's community-centric make-up.

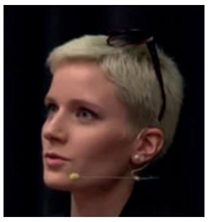
"For some of us we are considered weird back home, and here at Stugan we found fellow weirdos, who are just as passionate," stokes says. "The community here felt very important to our processes. From sharing ideas [and] opinions, to playtesting and critiquing. Everyone offered a different insight which you just cannot get anywhere – all at once and so many varied opinions."

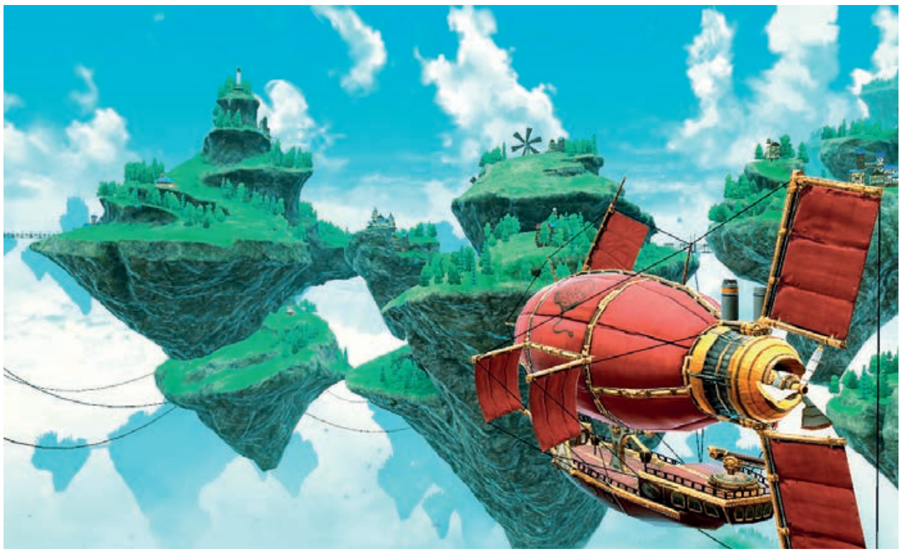
And for the organisers, that community – while not a complete surprise – has brought more to the table than they had hoped for.

"The community is like a bonus," admits project manager Karlikova. "We were hoping for it, and hoped people would collaborate. At the beginning there was a big decision: should we make this a competition or not? In the end we decided not to run Stugan as a competition, and that's meant people are really very helpful to each other and working together."

That shared experience, Karlikova says, has become tremendously important to Stugan, and impacted each visiting mentor, from game design veterans to experts in middleware and services.

Top to bottom: Geeiz Games' Laura Stokes and Rosvita Works' Simon Ashbery





Top to bottom: Stugan organisers Jana Karlikova, Oskar Burman and Tommy Palm

Main: That Brain's Leagues Above the Clouds

"I think we're going to stay friends forever," she says, demonstrating that even the project's manager isn't immune to the community spirit.

Palm, meanwhile, has a rather more tongue-in-cheek theory.

"They're all just suffering from the Stockholm Syndrome, after being kidnapped up here," he quips.

RURAL DEVELOPMENT

Yet, for all the talk of community, it's impossible to ignore how distinct Stugan's setting is. Those looming evergreen trees and the mirror-flat lakes also have something to add beyond a picturesque backdrop.

"While I can't say for certain how the Stugan setting has influenced the game, there's been some thorny design problems that I've solved while here, that I suspect I would've solved differently were I in my typical work environment," offers Bryan Gale, a UK indie working on *Induction*, a puzzler about time travel and paradoxes.

"And given how great this environment is for finding uninterrupted time to just think, I hope the solutions I've come up with here are the better ones."

Amy Dentana, reflecting on the environment that plays backdrop to her creation of *Sunshine*, a fascinating first-person exploration game that explores issues around privacy and security, adds: "Being surrounded by nature brings in a host of other benefits to the creative type.

"Walks are great when looking for inspiration or when facing a creative or technical problem. Having a lake and a running course at your doorstep makes it really hard to come up with an excuse not to exercise. Finally, during the summer here we only get about three hour's worth of night time every day – that's got to be good for working, right?"

Certainly, Dentana and many of the others aren't afraid of the all-night coding session, and it appears that the near-constant daylight has fostered several development marathons. There's hard work underway at Stugan, even if it is pock-marked by those midnight strolls and early morning swims.

A SUCCESSFUL STUGAN?

When it comes down to the all-important question of Stugan inspiring its members, accelerating their games and improving them as developers, it seems the project reached its ambitions. While Palm admits he was nervous with the concept making its debut, it seems the impact on the Stuganeers has been profound.

"[I've been impacted] very, very profoundly. I am not exaggerating," insists Wendelin Reich, whose canine-focused game *A Dog's Heart* also presents a bold new AI technology. "My project is very ambitious on the tech side and I have been working on it for more than four years. Stugan has really been the first time that I showed my project to total strangers."

And, Wendelin asserts, the influence of his fellow developers, as well as of the visiting mentors, has been especially significant.

"That has worked really well for me," he continues. "I made a platform pivot while I was here and changed and tuned many aspects of my game."

Now, of course, Stugan is done for the year. The teams are making their ways back out into the world emboldened and empowered, and the mentors are considering what's next. Everybody agrees Stugan has been a success, certainly. And now there's an appetite for more.

"All in all, I really hope and believe we can turn this into a annual thing, as we now will have ambassadors going back home, preaching about Stugan," concludes Burman.

"Before this year, we were just some crazy game execs in Sweden with an unproven idea."

The last word, however, should go to Mark Backler, a UK-based developer with a wealth of on-staff games development experience behind him who went to Stugan to flesh out his own atypical platformer *The Last Word*.

"It's amazing to have such highly successful people like Tommy Palm and Oskar Burman interested in your success just because you sent them a video of a game you're making that they liked," muses Backler. "Stugan is a pretty incredible experience and we all feel really lucky to be here.

"Everyone expects you to have to give up your IP or a share in your company but there's nothing like that," he later adds.

"So if you're reading this and are working on your own game, then make sure you apply for Stugan 2016." ■

THE STUGAN EFFECT

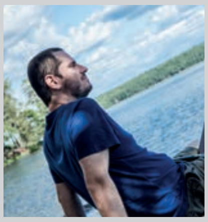
Some of Stugan's developers explain how eight weeks in the Swedish forests affected them

"As a team, it's been a pretty special experience for us since it's the first time for me to ever meet some of our members, after having worked with them daily for more than half a decade. We now had the opportunity to collaborate shoulder to shoulder in the same cabin, which has had a huge positive impact."
Dan Tabar, Founder, Data Realms

"That Brain is a fairly distributed team, and the stay at Stugan has really brought us all closer together and allowed us to align on where we want to take the game. We can now see the end of the project more clearly, and know much better how to get there."
Jonatan Crafoord, Game Co-creator and Sound Designer, That Brain

"Our time here has really given us the chance to just focus on *Keyhole* for a couple months, without having to worry about everyday life things like rent and our next meal. The support we've had from Stugan staff, mentors and other developers has been incredibly valuable."
Clifton B, Co-founder, Czarcade

"Because I have frequently worked by myself in the past, my games have kind of lived in this perpetual state of being neither good nor bad. Stugan, through all of the amazing mentors, living with other devs and weekly feedback sessions has made me much more comfortable about showing my game to people."
Izzy Gramp, Founder, Geeiz Games



"Before Stugan my levels felt almost like obstacle courses, whereas I now have a much better understanding of concepts such as pacing and anticipation, both key ingredients in keeping your players engaged and happy."
Nacho B, Programmer and Designer, Nacho Beard

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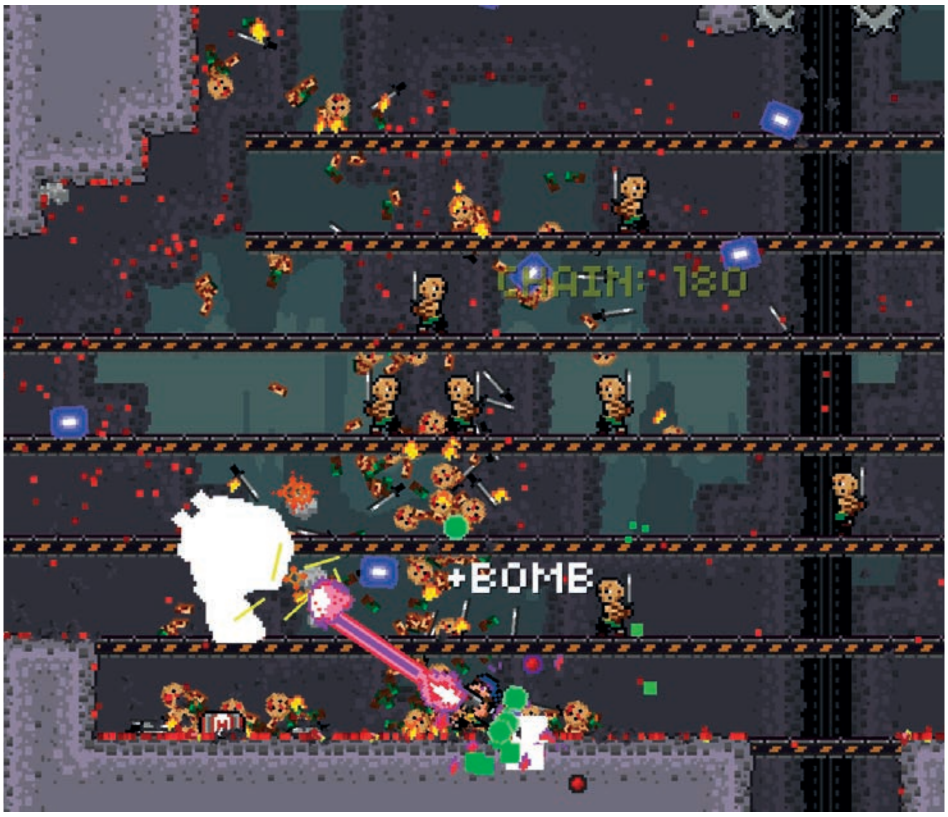

DESIGN
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Gunning for gold

Robo Pixel's Gunnihilation was the recipient of this year's UK Game of the Show award at Gamescom, a special prize created to highlight up-and-coming British talent. **James Batchelor** spoke to the studio's James Batten to find out more

Gunnihilation's manic multiplayer caught the attention of publishers and media alike at Gamescom, and even earned Robo Pixel the UK Game of the Show award

WITH A TITLE like *Gunnihilation*, UK studio Robo Pixel Games makes it perfectly clear what you can expect from their title: frantic action, bullets galore, and armies of enemies.

It might not be a heady, highly artistic concept compared to some indie titles, but its multiplayer mayhem has clearly struck a cord with the thousands of gamers who have tried the prototype on Flash portal Newgrounds. And the 25 other sites that stole it.

Inspired by Robo Pixel's love of classic action games like *Contra* and *Smash TV*, albeit with a few modern twists thrown in, *Gunnihilation* has benefitted from plenty of exposure thanks to the studio's policy on open and honest development.

"We know a lot of companies have strict rules when it comes to which build of a game gets seen by the public, but we've always been excited to show people how the game is progressing at every stage of development," explains art director James Batten.

"*Gunnihilation Prototype* was built with Flash and released for free via Newgrounds as what we like to call our 'proof of concept' build. The art was sloppy, and the code was rough, but we got amazing feedback.

"That information has helped us to develop the version we've been working on in Unity these last few months. It's the greatest feeling in the world when someone comes back to your Gamescom stand for another go."

Robo Pixel has also received plenty of feedback from fellow games developers.

"We're based in the North East and although the games community isn't massive there, the amount of support we've received is unbelievable," says Batten. "We try and show *Gunnihilation* as much as possible and it's great to have people who will tell us straight what's good and what's crap. All we can do is thank the guys in and around Middlesbrough for all their help – they know who they are."

MEDIA TARGET

Perhaps the biggest boost for *Gunnihilation* has been Gamescom 2015. Robo Pixel took the title to Cologne in the hopes of meeting publishers – especially ones that will offer feedback on how the game could be improved, even if they didn't want to sign it.

> ***"We must be doing something right, even though we're not sure what that something is."***
>
> James Batten, Robo Pixel Games

Batten says the game also caught the eye the media: "One of the best things to come from the event was our interview with BBC Radio 1. As a team we're all quite shy but it's a great feeling to know people are hearing about what you're working on, even if you have to stumble through an interview."

The crowning moment for the team was winning this year's UK Game of the Show award, a prize given by trade body UKIE to help highlight the quality of British games development. While Batten jokingly suspects copious amounts of German beer may have influenced the judges, he is nonetheless ecstatic about this accomplishment.

"It's absolutely incredible and we can't thank UKIE enough," he says. "We're still fighting over who's desk it's going on.

"We're our own biggest critics. Winning it is quite validating because it makes us think we must at least be doing something right, even though we're not entirely sure what that something is."

UKIE CEO Jo Twist adds: "We're absolutely thrilled for Robo Pixel Games. *Gunnihilation* is a fantastic game, and it is a well-deserved winner of the UK Game of the Show Award.

"There was a really high standard of games in the running for this year's award, showing what brilliant and varied games are being produced by the talent in the UK."

So what now for *Gunnihilation*? Batten warns that the game is "still a long way from finished" but the team is still optimistic about getting a final version into players' hands by next summer.

And while a trip to EGX is in the works, Robo Pixel will be taking an "events hiatus" for a while, since planning for such trips "stunts our productivity".

"We'd love to take a version of the game along to events with a working level editor. We've always planned on a PC release but we, possibly quite naively for our first title, have decided to try and go for a full cross console release. It's probably going to kill us but there are worse ways to go." ■

A game of Ice and Fire

Bigpoint discusses the development of its long-awaited Game of Thrones: Seven Kingdoms, and why it's staffing up its Berlin studio to finish the job

GERMAN DEVELOPMENT HOUSE Bigpoint is known for a raft of online games, from *DarkOrbit Reloaded* to *Drakensang Online*.

And now the company has nabbed the rights to the *Game of Thrones* licence – the global hit book and TV series. The studio is no stranger to licensing properties, having already developed a *Battlestar Galactica* MMO. But the expectation that comes with a series now engrained in pop culture represents a big challenge for the developer.

To face the task at hand, Bigpoint has put its Berlin studio on the job. Dependent on the production cycle, *Game of Thrones* will have anywhere from 50 to 100 employees working on it, and its still looking to recruit more talent. It's a significant project for the company, and one it has been working on since 2012 under the name of *Game of Thrones: Seven Kingdoms*.

The game will allows players to explore locations across *Game of Thrones*' world. But not just your typical MMO fair – Bigpoint CEO Khaled Helioui promises to deliver the emotional and psychological upheaval the series is famous for, with the game running on the book's intrinsic themes of betrayal, violence and a touch of fantasy.

It's a daunting challenge, but its one Helioui says Bigpoint can handle.

"*Game of Thrones* is one of the biggest and most popular TV shows in the world right now – from a business standpoint the rationale is pretty obvious," he explains.

"But more importantly, what drove us towards this IP was the depth of the universe created by George R.R. Martin and the potential it could lend to a game universe. The universe is enormous and offers so much room for exploration. There are so many iconic landmarks and variation in locations."

Despite the confidence, Helioui admits developing a game under such a huge licence presents a tough challenge for the studio. Many fans gripped by the series' character and plot points will be acutely aware of all the finer details surrounding the story's mythology.

"One of the challenges is making sure, to a minute detail, that all elements are completely consistent and in-line with what fans would expect when entering the *Game of Thrones* universe," says Helioui. "There is also the general feeling that players will expect from a game based on this license. It is imperative to us that fans will experience an authentic representation of the world when they enter our game."

While working on a new intellectual property can be risky, creating a new world from scratch means developers' boundless creativity can be given free reign – within reason of course. Studios working on big licences, however, are forced to live within the constraints of the existing universe, which could prove constricting.

Helioui says the team is working closely with HBO to ensure there is enough content in its online game for users to keep them playing for the long-term, whilst not breaking any existing storylines or rules of the fantasy world.

"Thankfully the universe and lore on which it is based is so huge that there really is a massive amount of content for us to be able to play with," he says.

To meet its vision for the game, Bigpoint has developed its own in-house game engine. Whereas it was previously announced that *Seven Kingdoms* would harness the popular Unity engine, Bigpoint is now building a new proprietary tech called Nebula.

Helioui says this allows the developer to form huge territories for players to explore and potentially conquer, and make the world feel as real, spectacular and as expansive as Westeros and Essos are in the books and TV show.

"It is lightweight, which also allows us to reach both core players and a wider audience, which is in-line with one of our guiding values of accessibility," says Helioui. "We want our games to be playable by everybody."

Helioui says development on the game is shaping up nicely as progress continues, and work is coming on in "leaps and bounds" with each build. There's still a lot of work to do however, he states, to achieve the vision it has for the game.

To satisfy its own ambitions and the high expectations of fans, Bigpoint is currently hiring a number of staff for its Berlin studio to work on the title. Positions include senior live producer, senior game designer, senior technical artist and lead 3D artist. For further details on these jobs and other open vacancies, you can visit the Develop Jobs board for more details. ■

www.develop-online.net/jobs

Bigpoint CEO Khaled Helioui says the world built by A Song of Ice and Fire writer George R.R. Martin is so enormous that it leaves plenty of room for a games developer to explore

The glory of Guildford

The county town of Surrey is one of the UK's oldest development hubs and is still going strong. **James Batchelor** speaks to local experts to find out more

Guildford is home to a plethora of game studios, including 22Cans, Supermassive Games, Media Molecule, Edge Case Games, Hello Games and many more

"IT ALL STARTED with Bullfrog." That's how Alan McDairmant, director of product development at Criterion, begins describing the history of Guildford's games industry.

The *Theme Park* studio opened in 1987, co-founded by a then-unknown Peter Molyneux, and gained recognition for titles such as *Populous*. But it's the firm's partnership with a leading publisher that really kickstarted games development in the area.

"EA was working with Bullfrog back in the 1980s, and acquired the studio back in 1994," McDairmant explains. "That started a period of real growth."

More studios opened doors in the early '90s, including Simis in 1992 and McDairmant's own company in 1993, originally part of camera manufacturer Canon before EA acquired it in 2004.

Simulation games specialist Simis was later purchased by Eidos and became Kuju Entertainment. Meanwhile, Molyneux left Bullfrog in 1997 and set up Lionhead, the studio that would create the *Fable* series.

Through all these studio openings, acquisitions and more, a thriving hub began to grow in Guildford, attracting aspiring games makers from across the UK. The gathering of such talent led to the creation of even more studios. *Fractured Space* dev Edge Case Games, for example, was founded by James Brooksby, formerly studio lead at Kuju subsidiary Doublesix Games.

"What's interesting is that throughout these periods of growing and fracturing, the bigger studios have led to the creation of lots of new studios with people moving around," he says. "It's been fascinating: you meet people you never would have met otherwise, like ex-Bullfroggers moving to Kuju, or people from Criterion moving around – there's been a cycle of people.

Our roundtable of local experts, gathered for the inaugural Galvanising Guildford Games summit at the University of Surrey, attempts to name as many studios as they can: Rodeo Games, Fireproof, Pixel Hero, Escapist Games, Polynation, Turbulenz, Wonderland.

> ***"Throughout these periods of growing and fracturing, the bigger studios led to the creation of new ones."***
>
> James Brooksby, Edge Case

And that's without the larger studios still yet to be mentioned: Media Molecule, 22Cans, Supermassive Games, Born Ready Games, Hello Games – the list goes on. Codemasters even had a studio in Guildford for a few years, while Unreal Engine creator Epic Games chose the town as its UK base.

It's a crowded area, but one that is filled with old friends and colleagues with relationships dating back to those early studios. Supermassive's executive director Dom Oldrey observes that many people running studios in Guildford cut their teeth in QA at Bullfrog.

"The thing that's really out of our control but creates a massive swing for Guildford is that the money's not really based here," he adds. "We're a service industry that creates the stuff, but the money is pretty much always coming from outside the country. We have some, but if you look at the big players around here, Sony is Japanese, Microsoft owns Lionhead, Criterion's parent EA is American, as is Epic Games."

COMMUNITY SERVICE

Such a high concentration of developers has created a friendlier community than you might expect. While rivalries exist, they never escalate into animosity.

The prime example of this, Brooksby says, is how studios helped each other during the great flood of 2013, famous for the destruction to Hello Games' premises and equipment.

"We're nearer to the river than Hello Games, so it went through our wall and into their offices," he says. "Unfortunately, they were all on holiday at the time. So I phoned Sean and we helped out – this was all on Christmas Eve."

He goes on to say that while the industry is close-knit in Guildford, new relationships are forged all the time. The veterans from the early studios have also created different social circles.

"In fact, people go to a different pub depending on your genesis," says Brooksby. "Sometimes people cross over, but you can almost see places as 'the old EA guys pub', or the 'Lionhead pub'. Where you started sometimes dictates who you'll end up meeting."

Oldrey adds: "There's a really good lifestyle aspect. When our general staff go out, they

Left: Our roundtable participants from left to right: Escapist Games' San Shepherd, Supermassive's Dom Oldrey, Edge Case Games' James Brooksby, Criterion's Alan McDairmant and University of Surrey's Adrian Hilton

end up talking to a bunch of different people working on lots of different projects. You're going to get a wider perspective on what's going on in games than if you worked at a firm based in a barn in the middle of nowhere.”

LOCAL TALENT

The result of such a supportive community is that there are plenty of developers willing to help out when a studio sadly shuts down.

“At Supermassive, we took on a lot of people when Codemasters shut down,” says Oldrey. “Likewise, Codemasters got a lot of people from Criterion when it was going through a troubled period. And you do see that when big projects finish, people move around a bit.”

Escapist Games director San Shepherd adds: “If a studio is shutting down, you might find people standing outside it that afternoon, taking people down the pub and trying to recruit them.”

No games hub can survive on established talent alone, of course, and Guildford developers search far and wide for promising new employees.

“We can find very talented people quickly and easily,” says Shepherd. “In terms of new talent, yes, Guildford has a wealth of that. It's difficult to sift through when hiring people directly out of university – it's been very hit and miss for us. Some of the best talent we've had has not come from university but has been homegrown, sitting at home, building stuff.”

McDairmant observes that he hasn't noticed many staff moving between studios in recent years. Brooksby says that there was a lot more fluidity between Guildford developers prior to 2009.

“Because of the new opportunities to set up on your own and create your own thing, that means most of the people who were the veterans or the very experienced in that pool will do things themselves or try something new out. Some of the people that you might have hired have become start-ups,” he explains.

Adrian Hilton, professor of vision and graphics at the University of Surrey, is surprised there's not a stronger link between the games community and his own institute: “Surrey Electronic Engineering is probably the largest of its type in the UK, and it's been right at the top for 20 years. So we're turning out graduates that have a lot of job opportunities and many go into the media and broadcasting industries, yet we haven't established strong ties to the local games industry.

“In fact, in my experience, we have more people going the other way: coming from games companies back into university to do PhDs and things like that as they change their career path.”

McDairmant says: “I guess it's a two-way street, because we've not made a huge effort to reach out but then we've also not had anyone reaching out directly from the university to us either.”

> **“*As a UK dev community, it seems we're still not quite capable of going big like the Americans are.*”**
>
> San Shepherd, Escapist Games

There are still some studios that make the most of the university's graduate output, even if it's not arranged through the institute itself. Supermassive Games takes up to six interns every summer, primarily students at the end of the second year and treats them as employees for three months.

Hilton admits the university has some work to do in highlighting games as a potential career. His team invite members of the games industry to speak to students from time to time, but more needs to be done.

THE HOLLYWOOD OF GAMES

Many of the studios even hire from abroad, with applicants attracted by the high calibre of developers in the area. With popular franchises like *Fable*, *Need For Speed*, *LittleBigPlanet* and more developed within the town, Guildford enjoys an international reputation that is the envy of other UK hubs.

“When you're in a meeting with companies from China, Korea or wherever, they'll recognise the name Guildford, which is amazing given that we're quite a provincial town and there's not a lot going on here,” says Brooksby. “They might not know exactly where it is in the world, but it does get recognition.”

It helps that the quality of the games that come out of Guildford are almost universally of a high quality, although as Shepherd observes: “Almost all of them have been pretty quirky. British quirky, that is, rather than American mainstream quirky. As a UK development community, it seems we're still not quite capable of going big like Americans are.”

LIFE IN GUILDFORD

As for the day-to-day of a Guildford developer, our local experts are largely full of praise. While still an expensive area to live in, it remains cheaper than London and its proximity to the UK capital is a major draw – even in ways you might not expect.

“Ironically, it's commutable from London, especially for graduates,” says Oldrey. “A lot of them, once they graduate, plan on having a couple of years in London, so the fact that they can commute down is great. For me, I think that's madness.”

McDairmant observes that being close to London enables games makers to connect with other industries: “We've been working with a lot of VFX firms, for example, and a lot of those guys are based in London. You want that expertise when you're working on bigger, triple-A, blockbuster games now.”

Guildford is also close to other important UK games hubs, including Brighton, Southampton and Portsmouth. And when it comes to international relationships, the town is just 40 minutes from Heathrow Airport – if you miss the rush hour, of course.

Bizarrely, the downside with living in Guildford is a more technological issue.

“The limitations of broadband connections and so forth really affect businesses around here,” says Shepherd. “I uploaded the last build via my phone's 4G connection and it was faster than the internet in the building. Ten times faster.”

Hilton says that the university, currently researching the possibility of 5G mobile connections, enjoys a faster connection and even hosts an incubator that's open to games studios, among other businesses. However, Brooksby says that dev staff can be oddly stubborn about where they work in the area.

“You don't have to move much further out of central Guildford before you start to lose the interest of staff, especially the younger guys who come in,” he says. “So even moving to the Science Park, away from the centre of town is enough to start losing good people.

“Of course, if there was a pub right in the middle of the research park… and maybe a greasy spoon café…”

Guildford's greatest advantage is playing host to its wide range of games studios of all scales. Whether you wish to work for a publisher-owned powerhouse like Criterion or establish your own studio, there's always opportunities for a developer – regardless of your level of experience.

“In some ways that's a security blanket for anyone working in Guildford,” says Brooksby. “They know if they settle down here for a new job, chances are pretty good that they'll get hired by another studio if things fall apart. Rather than going to a new start-up in, say, Kent: if that fails, you're stuck in Kent.” ■

THE STUDIO
HOT LIST
RETURNS

develop
100

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How do you hire for VR?

It's not long now until virtual reality is out and in the hands of consumers. But how are studios hiring for these new and technically-challenging projects? We speak to Guerrilla Games' boss Hermen Hulst on how the Killzone studio is handling it

By Alex Calvin

GUERRILLA GAMES IS one of the first studios making a game for Sony's upcoming Project Morpheus virtual reality headset.

Revealed at this year's E3, *Rigs* is a mech arena shooter that uses the new tech, and is being developed by Guerrilla's Cambridge studio. But how is the firm hiring for VR projects?

"The reality is you can't really hire for VR," co-founder and MD Hermen Hulst tells *Develop*.

"It's still so new that there isn't a readily-available supply of people with a proven track record of building successful virtual reality games.

"That said, we do look for a certain mindset. A certain attitude is needed when you are working on new technology and we nurture a research and development atmosphere, so we staff people who have shown in the past that they're interested in tinkering round with the PlayStation Move or with other new technologies. They're the inventor type, let's call it that. We look for some evidence of the work they have experienced in inventing new technology. You can look for those people to strengthen your team as well."

> ***"VR's so new that there isn't a readily-available supply of people."***
>
> Hermen Hulst, Guerrilla

And what should a candidate do to get a role at the Amsterdam-based studio? Hulst says that regardless of the role, the studio wants people to have something to show for themselves.

"When you are a coder, obviously we look at the projects that you have worked on and code examples. But even when you are somebody that's straight out of college, we always look for people with something to show for themselves, we look for people who have done extra-curricular activities.

"Maybe they were part of making a game and can prove they were responsible for part of it, but we get guys who built their own game engine which is probably as awesome as you can expect from a student."

Hulst adds it's important to identify how fresh hires will fit into a new project with differing requirements, so it's important to carefully judge a potential employee's work processes.

"When you hire a story writer and they have published games, you can look at the product itself and you can see the fruits of that person's work," he says. "When someone's a tools programmer, that's a little more difficult to gauge from the actual end result. So you talk about the processes and the changes that people have made and their work flows. You also ask for specific examples that we'd regard with a group of people." ■

MOVERS AND SHAKERS

Playground Games recruits a trio of high-profile staff

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Ubisoft Reflections' Craig Pearn on getting a job in Newcastle

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GET THAT JOB

InnoGames' Dennis Rohlfing on making the jump to studio head

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MOVERS AND SHAKERS

This month: Playground Games, Ubisoft Reflections, Playtonic, FreeStyle Games and Zynga

NEW STARTERS ARE PLAYGROUND GAMES

PLAYGROUND ■ The *Forza Horizon* studio has recruited three new high-profile staff.

JAY MCKEE comes on board as senior rendering engineer with over 20 years of development experience. He has held roles at the likes of Electronic Arts, 3DO and Crystal Dynamics. Before Playground he was at AMD, where he co-wrote its Forward+ rendering tech.

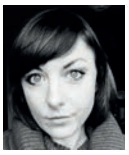
> ***Jay McKee will also act as a fantastic mentor and role model to our new generation of engineers just starting out.***
>
> Alex Wright-Manning, PG

"His experience and ability will not only add considerable specialist technical value to the studio, but he'll also act as a fantastic mentor and role model to our new generation of engineers just starting out on their games industry journey," said head of talent Alex Wright-Manning.

Meanwhile, **DANIEL LIM** has been hired as senior animator. Lim has had roles at SCEE, Guerrilla Games and recently Rockstar North.

Finally, **JOSHUA GRASS** joins Playground as senior AI engineer. Grass has had stints at Bungie, Microsoft, Surreal Software and Monolith Productions.

"It's a real testament to how far we've come as a studio in the last five years that we can attract developers of Joshua's skill and experience," Wright-Manning said. "He'll play a big part in our continued growth and development." ■



REFLECTIONS ■ Ubisoft's Newcastle-based studio Reflections has recruited **HELEN SIMM** as its senior UI artist for its upcoming ambitious open-world third-person shooter *Tom Clancy's The Division*.

Prior to this role, Simm worked at a number of games companies, including Disney Interactive Studios where she worked as a production intern. She then joined Climax as its UI artist for *Legacy of Kain: Dead Sun*. In 2012, she moved to Rare to work on *Kinect Sports Rivals*, before joining Codemasters as its senior UI artist on the *DIRT* and *Overlord* games.

PLAYTONIC ■ The *Yooka–Laylee* studio has made two new hires. Programmer **KARN BIANCO** joins from Rare, having previously worked on the recently-launched *Rare Replay*, the upcoming *Sea of Thieves* and the *Kinect Sports* titles.

Meanwhile, **BECKY LAVENDER** also comes on board as a programmer straight from an internship at 22Cans.

"Becky and Karn are two of the region's most exciting young engineers," said editorial and communications director Andy Robinson. ■

FREESTYLE GAMES ■ The Leamington Spa-based studio has hired a community manager for its upcoming game *Guitar Hero Live*.

STEVIE WARD has a wealth of experience in community management. She started her career as an associate video producer for CCP before becoming the firm's community representative. Since she has held community and brand ambassador roles for SCEE, EA, Multiplay, Trion Worlds and GiffGaff.

"Who wouldn't want a chance to work on a series as iconic as *Guitar Hero*?," said Ward. ■

ZYNGA ■ Former EA exec VP **FRANK GIBEAU** has joined Zynga's board of directors.

Gibeau worked at EA for over 20 years and was a key player in the publisher's mobile business, helping to grow the likes of *The Simpsons: Tapped Out*, *Plants vs Zombies*, *Real Racing* and *Minions*.

"Zynga has the products, the people and the powerful plan needed to make its mission to connect the world through games a reality," said Gibeau.

"I look forward to partnering with him and my fellow board members during this incredibly exciting time for Zynga and the broader mobile gaming industry." ■

THIS IS WHERE WE WORK

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PLAYGROUND GAMES

Leamington Spa, UK
www.playground-games.com

The Leamington Spa-based developer behind the Forza Horizon games employs over 100 members of staff and occupies three floors at its very orange-coloured office.

RECRUITER HOT SEAT

Ubisoft Reflections' talent acquisition manager Craig Pearn on getting a role at the Newcastle-based studio

BIO

Company: Relfections, a Ubisoft studio
Location: England
Hiring: We're currently looking to hire senior programmers, artists, designers and animators with a passion to increase creative/artistic direction and producers that can implement best processes and take responsibility for game features.
Where to apply: craig.pearn@ubisoft.com
Website: reflections.ubisoft.com

> *We are looking to attract senior and expert level people.*
>
> Craig Pearn

What differentiates your studio from other developers?
Reflections is a studio that isn't afraid to take risks and our approach to internal development has the full support from Ubisoft. Reflections have been making games in Newcastle for over 30 years and we continue to produce top triple-A titles and offer a huge amount of stability to our developers.

Many people in the games industry talk to me about their lack of work-life balance. At Reflections we actively promote fun and have dedicated and funded Social Club running events outside of the studio including rally driving, diving, Comic Con visits and event stargazing at no cost to the employee.

How many staff are you looking to take on?
We are looking to attract senior and expert level people that can create new technology, build innovative systems and increase the creative direction of the studio.

Whether we have an open role or not, I'm always eager to speak with innovative people that have established themselves in the games industry.

What should aspiring devs do with their CV to get an interview?
Before sending your CV, check you have done everything possible to provide the information relevant to the job and ensure it is clear and well presented.

This is the first chance to promote yourself so I need to see where you have been working, for how long, your role, your responsibilities, provide links to attractive portfolio's etcetera.

Who is the best interviewee you have ever had and how did they impress you?
I received a CV from a candidate who had obviously spent some time researching the company and the role, and she had tailored her CV to match.

I had high hopes for the interview and was wow'd immediately as she was able to answer questions clearly, provide excellent examples of her work and elaborate on points to demonstrate her understanding and knowledge. She showed her drive and ambition, which are qualities we are looking for here.

And who was the worst?
I had an interview once and no matter how open my question was, the candidate still managed to provide one word answers. It was a long hour.

What advice would you give for a successful interview at a studio like Reflections?
At Reflections we love people who display enthusiasm, honesty and passion for what they do. Even if you realise during the interview that this role isn't for you, you never know what opportunities may come up in the future.

If you have recruited internationally, what is the process like?
From start to finish we are able to provide as much information as you need to make certain you have an enjoyable experience during the recruitment process. Interviews are initially conducted over phone or video call and we then like to invite applicants to the studio to meet various people from the team and see the city, as international moves can be a big step. We also offer guidance about living in the locality, the best places to live, things to see and do, schools for your children, and help for your spouse and family to help them settle, too.

How have your recruitment needs change at your studio?
In the past we have hired for specific projects including, *Watch Dogs*, *Just Dance* and *The Crew*. Now we are looking to attract people who are pioneering and pretty obsessive about what they do, to drive the studio in the direction of creating exciting and memorable gaming.

Why should developers join a triple-A studio like Reflections when indie and self-publishing have become so much more accessible to them?
Since 1984 when Reflections was established, many indie and self-publishers have slipped by. Jumping from one job to another can't be great for anyone so if you want to work on exciting projects, have the same amount of creative freedom and know that you can genuinely advance you career, then you should join Reflections. ■

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GET THAT JOB

Development specialists offer advice on how you can bag that career leap

THIS MONTH: STUDIO HEAD, WITH INNOGAMES' DENNIS ROHLFING

What is your job role?
I'm the Studio Head of InnoGames. In this role I am the owner of a portfolio of online games and am responsible of managing its long term business success. My primary goal is to drive the success of InnoGames' product portfolio over the different lifecycle stages and individually define the right strategies in line with the overall company strategy.

What qualifications and/or experience do you need?
Personally, I graduated from University with a degree in computer science and did an internship as a project manager in a gaming company before I became a junior producer back in 2007. I had already started developing a few games during my studies where I was involved in game design, development and project management roles – mostly everything at once. Other possibilities to enter the video game industry are university degrees in economics and computer science, or from schools focusing on game development, as well as internships.

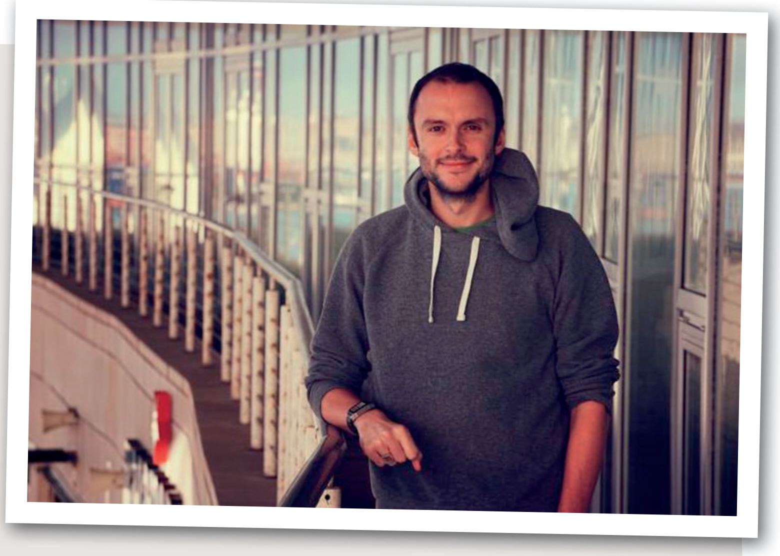
How would someone come to be in your position?
Since we don't acquire jobs by displaying our creative abilities, a producer has to bring other things to the table: networking, having general and specific market knowledge is part of the job – but only a first step. You need to be able to actually channel your knowledge and allow others to profit from it. Being confident of your own knowledge is worth nothing if you can't make sure others respect your opinions.

If you were interviewing someone, what do you look for?
A first step would be a CV that does not hide weak spots in colours and words. Be open about your past. The industry is small, so trying to sell a wrong image of yourself will backfire at some point. ■

If you've got job advice to share, email **acalvin@nbmedia.com**

Employee HOT SEAT

Climax Studio's head of business development Josh Tarrant on how he got his role at the developer



What do you do at the studio?
I'm the Business Development Manager for the studio. This means that I work closely with our CEO and the leads on upcoming projects. I keep in regular contact with external publishers and developers to see if there are any potential partnerships.

How did you get your current job?
I was originally speaking to Climax about 12 months before I joined, but the right role wasn't available. I took another role for another development company and then my contract came to an end. Then out of the blue Stuart Godfrey, our internal recruiter, messaged me to say he had an ideal role for me. A phone call, then a face to face interview and hey presto I was offered the position. It was a really easy process. Communication and feedback was really quick, which helped me to make my decision.

What perks are available to those working at the studio?
For me, the top perk is having access to a Nespresso machine – I like/need my coffee and not having to rely on instant is amazing. We have fresh fruit and other drinks. There is Beer Friday where the majority of the studio decamps to the local for an hour. Then we have regular nights out throughout the year, as well as both Summer and Christmas parties.

What is the recruitment process like at your studio?
Godfrey works very closely with the studio department heads and the company directors to ensure that we are not only hiring skilled people but also people that will fit in with the Studio and its ethos.

> ***"There is Beer Friday where the majority of the studio decamps to the local."***

What was your own interview like at Climax?
My interview was very relaxed and I felt it was more about seeing if I would fit into the studio rather than it being skills based. It's hard not to get impressed by the offices, as they are right on the water. And the day I came in, the sun was shining, which made me think 'yeah, I can easily work here'.

Describe what the atmosphere is like at your studio?
Compared to other studios that I have worked at, I find Climax more exciting. Due to the nature of our business, we have multiple projects on at any time, which means one day I might be trying out our new virtual reality game or play testing our upcoming *Assassin's Creed* game. This for me keeps everything fresh and new.

Name: Josh Tarrant
Title: Head of business development
Developer: Climax Studios
www.climaxstudios.com

SKILLS AND TRAINING

This month: National Film and Television School

NFTS
Beaconsfield Studios
Station Road
Beaconsfield
Bucks HP9 1LG

T: 01494 671234
E: games@nfts.co.uk
W: www.nfts.co.uk/games

Graduation projects from games students are exhibited each year at the Eurogamer Expo and British Film Institute for the public to play

Originally set up as The National Film School, the now-named National Film and Television School has a long history of educating talent for work on the silver screen, and later the small screen.

In 2011, however, the educational institution started accepting applications for a new two-year MA programme in Games Design and Development, which started in January 2012.

The NFTS is in a unique position to offer a specialised education for aspiring developers. Games students get the chance to work with specialists on other MA courses in numerous film and TV disciplines.

"This means that games projects involve participation and practical input from screenwriters, sound designers, composers, cinematographers, producers, production designers, production managers and others," says the head of department for game design, theory and screen arts Jon Weinbren.

> ***Students have access to film studio and television production facilities.***
>
> Jon Weinbren, NFTS

"They all bring their own specialist knowledge to the projects undertaken as part of the course, and of course to the games graduation projects we exhibit every year at EGX and the BFI."

During the course, students get the chance to work on a variety of group and solo projects throughout each year of study. First year modules include playable 3D environments, collections of mobile and tablet games, interactive drama sequences and character performance experiments.

As an example of the collaboration Weinbren mentions, games students are then specifically allocated sound design, composing, screenwriting, producing and production design students, according to the needs of their individual project.

In the second year, meanwhile, games students lead on their own final project, recruiting onto their teams specialists like above.

The NFTS has relationships with numerous studios across London and the South East. This results in guest tutors from the local industry, as well as speakers from elsewhere in the country or even from overseas.

Its advisory group includes members from Sony, Microsoft, Media Molecule, The Chinese Room, EA, NaturalMotion and others. These industry experts are said to regularly advise course leaders on content and its delivery.

Though it only runs the one course in games, the NFTS houses two games labs equipped with high spec PCs, Macs, tablets, all currently consoles, VR headsets and other peripherals and input devices.

It's also a member of Sony's PlayStation First Academic programme, giving students access to PS4 dev kits.

"Motion and performance capture tools are available through local partnerships, and the course is well equipped with all the relevant game engine and content development software from Unity, Unreal, Autodesk, Adobe and others," says Weinbren.

"Games students also have access to full professional film studio and television production facilities and equipment on site." ■

INFO

Course: Games Design and Development (MA)

Country: United Kingdom

Founded: 1971

Staff: Jon Weinbren (Head of Department, Game Design, Theory, Screen Arts), Sion Lenton (Game Design and Project Management Tutor), Alan Thorn (Game Coding and Development Tutor – Unity, C#), Nilly Brook (3D Animation and Modelling – Zbrush, Maya), Alan Lewis (3D Modelling – Maya), John Dower (Script Development and Virtual Performance)

Alumni: Bojan Brbora (4pm Games), Albert Bentall (Sony London Studio), Xander MacLeod (Reloaded), Jess Curry (The Chinese Room), Adele Cutting (Sound Cuts), Lydia Holland (Ubisoft)

NFTS
National Film and Television School

Interface
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FOR MORE INFORMATION CONTACT CONOR TALLON
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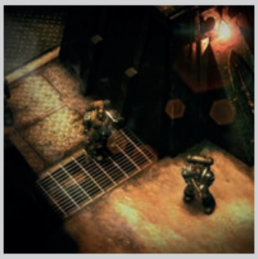
BUILD

THE LATEST TOOLS
NEWS, TECH UPDATES
& TUTORIALS

Mobile must-haves

Making a game for smart devices? **James Batchelor** offers a comprehensive round-up of some of the best tools available to help you ensure your mobile hit stands out

ENGINES



UNREAL ENGINE 4

Company: Epic Games
www.unrealengine.com

Epic Games is keen to show that its high-end engine can have just as much impact on mobile as on consoles. The tech supports iOS and Android. Rodeo Games recently used the engine for its 3D mobile strategy game *Warhammer 40,000: Deathwatch*, demonstrating its graphical power.

UNITY 5

Company: Unity
www.unity3d.com

The latest iteration of the widely-used engine maintains its predecessor's level of accessibility and ramps up the production quality, introducing physically-based shading, 64-bit support and Geomerics' Enlighten tech. Space Ape Games has already used Unity 5 to power its new game *Rival Kingdoms*.

GAMEMAKER: STUDIO

Company: YoYo Games
www.yoyogames.com

Known for powering *Hotline Miami* and *Spelunky* and *Nidhogg*. GameMaker: Studio uses a drag-and-drop interface and its own scripting language to enable both new and established developers to build prototypes and full games quickly. Free and paid-for versions are available.

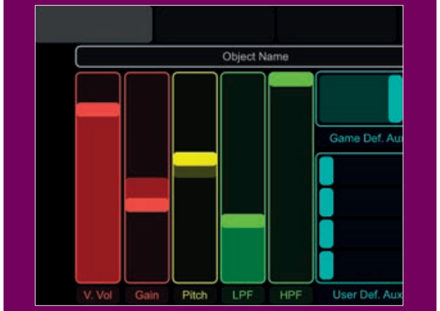
MARMALADE

Company: Marmalade
madewithmarmalade.com

The team behind this cross-platform dev tool prides itself on giving developers choice. Users are able to build and port games like *SimCity BuildIt* to iOS, Android, Windows 10, Roku and more from a single codebase in C++ or Lua. Marmalade also promises native performance on each device.

HEARD ABOUT

Jessica Curry on scoring the apocalypse in Everybody's Gone to the Rapture
P35



TOP TIPS

Ten things you didn't know you could do with sound engine Wwise
P36

UNITY FOCUS

5 Lives Studios on crafting the futuristic world of Satellite Reign
P42

ENGINES

PHYREENGINE

Company: SCE
develop.scee.net

This free game engine is available to licensed PlayStation developers, but it can be used to build games for multiple platforms, including Android and iOS. It is built with speedy development in mind, as shown by the level editor that allows Lua script-driven game creation with live in-game editing and playback.

PLAYCANVAS

Company: PlayCanvas
www.playcanvas.com

PlayCanvas is a unique cloud-based game engine that allows developers to build games within their browsers – even on mobile – using HTML5 and WebGL. It is free to solo developers, but teams can develop titles collaboratively via the cloud, with no need to download tools, for a monthly fee.

STINGRAY

Company: Autodesk
www.stingrayengine.com

The Stingray game engine is a completely new offering from Autodesk. The tech is built on the data-driven architecture of the Bitsquid engine, which the firm acquired last year. Subscription plans, including with Maya LT, are available from $30 a month. The tool supports console, desktop and mobile platforms.

HAVOK VISION ENGINE

Company: Havok
www.havok.com/vision-engine

Optimised for deploying games to iOS, Android and Tizen, Havok's mobile engine specialises in creating triple-A titles for smart devices. It features a range of game-ready features, and integrates with a variety of third-party tools. Havok also promises high performance, even when creating highly detailed, realistic scenes.

MONOGAME

Company: MonoGame
www.monogame.net

Earlier this year it was announced the XNA Framework is no longer required to use MonoGame, a significant milestone for the tool. It continues to help devs bring their games to mobile, among other platforms. It uses C# and other .NET languages, and its open source nature allows devs to customise the tools however they need.

energy
hi-score
000215175
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APPGAMEKIT V2

Company: The Game Creators
www.appgamekit.com

Designed as a one-stop shop for mobile development, the newest version of TheGameCreators' AppGameKit was funded by Kickstarter. Deploying to iOS, Android, Windows and Blackberry, it has not only be used for multiple mobile games, it also powers the Driving Test Success app.

CORONA SDK

Company: Corona Labs
www.coronalabs.com

Now available for free, Corona is based on the Lua coding language. While Lua is easy to learn, the SDK also offers a comprehensive API library helping devs add everything from animation to networking with a few lines of code. It deploys to mobile platforms including iOS, Android, Windows Phone and Kindle.

GAMESALAD

Company: GameSalad
www.gamesalad.com

The team behind GameSalad boldly claims that new developers can use its tool to learn the basics of games development and make their first title in just one hour. The tool's unique and easy-to-use drag-and-drop interface lets creators build games quickly for iOS, Android, Amazon Appstore and HTML5.

HAXE

Company: Haxe
www.haxe.org

Another open source toolkit, Haxe is based on a "modern, high-level, strictly-typed programming language", although its creators assure developers that it is easy to learn for anyone familiar with Java, C++, PHP or AS3. Compiling games for iOS and Android, Haxe is also the tech behind the acclaimed *Papers, Please*.

STENCYL

Company: Stencyl
www.stencyl.com

'Create amazing games without code' is the promise that Stencyl makes. The toolset is designed with a drag-and-drop interface where blocks of scripting snap into place, with plenty of ready-to-use blocks available. Devs can also create their own blocks through code and publish to iOS, Android, Flash and more.

PHASER

Company: Photon Storm
www.phaser.io

This open-source framework allows developers to create HTML5 games for mobile, as well as Canvas and WebGL games for browsers. Phaser games can be coded in JavaScript or TypeScript and the engine's website features countless free examples so devs can learn how to code physics, shaders, animation and more.

LIBGDX

Company: Mario Zechner
www.libgdx.badlogicgames.com

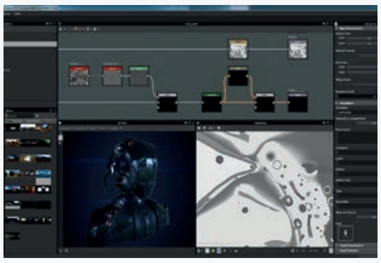
A Java game development framework, Libgdx gives devs an environment for rapid prototype where rather than deploying to iOS, Android or Javascript after every change to the code, users can debug via a native desktop app. It can be used to create 2D and 3D games that can be deployed for iOS, Android and Blackberry.

GRAPHICS & ART

ARM MALI GPU TOOLS

Company: ARM
malideveloper.arm.com

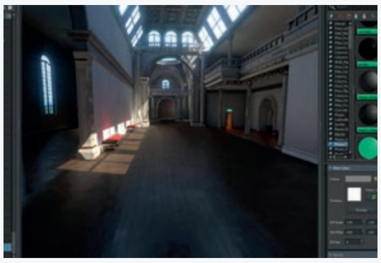
The Mali family of GPUs can be found in millions of smart devices, and ARM has created numerous tools to help developers take full advantage of them. Ranging from the Graphics Debugger and the GPU Shader Development Studio to an OpenGL ES Emulator, these give mobile devs the tools they need to make the most of Mali.



SUBSTANCE DESIGNER 5

Company: Allegorithmic
www.allegorithmic.com/products/substance-designer

Specialising in physically-based rendering textures, the latest version of Allegorithmic's tool makes it easier than ever to improve the look of your game. The node-based interface allows for quick and efficient changes, and textures created are compatible with any game engine – even in-house ones.



ENLIGHTEN

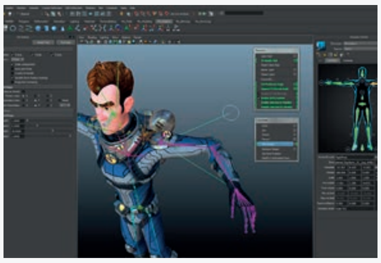
Company: Geomerics
www.geomerics.com

Geomerics' impressive lighting tech may appear to be geared towards triple-A console and PC titles, but scalability means it can be just as effective on mobile. It delivers dynamic lighting through an accurate real-time simulation of global illumination – or, to put it another way, how light transfers between surfaces.

YEBIS 3

Company: Silicon Studio
www.siliconstudio.co.jp/middleware/yebis/en/

Silicon Studio's post-processing effects middleware is used by Hollywood greats like Pixar, but it is also available to mobile developers. Using optical aberration and correction simulations to mimic the images captured by real lenses, Yebis 3 helps devs create near photorealistic graphics on iOS and Android.



MAYA LT

Company: Autodesk
store.autodesk.co.uk/mayalt

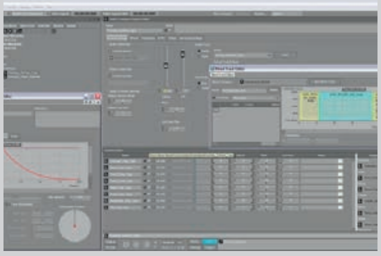
A cost-effective alternative to Autodesk's flagship Maya product, the LT edition is a 3D animation and modelling tool aimed at indie developers. It also features a range of lighting, materials and texture baking functions, and the ability to export your creations to other tools, including leading game engines.

SPEEDTREE FOR GAMES

Company: SpeedTree
www.speedtree.com

This year's winner of the Develop Award for Design & Creativity Tool enables mobile studios to fill their games with lush vegetation. The tool features a special mobile resolution, generating trees with around 1,000 triangles – as opposed to the desktop standard 8,000 – to ensure smooth performance on low-end devices.

AUDIO



WWISE

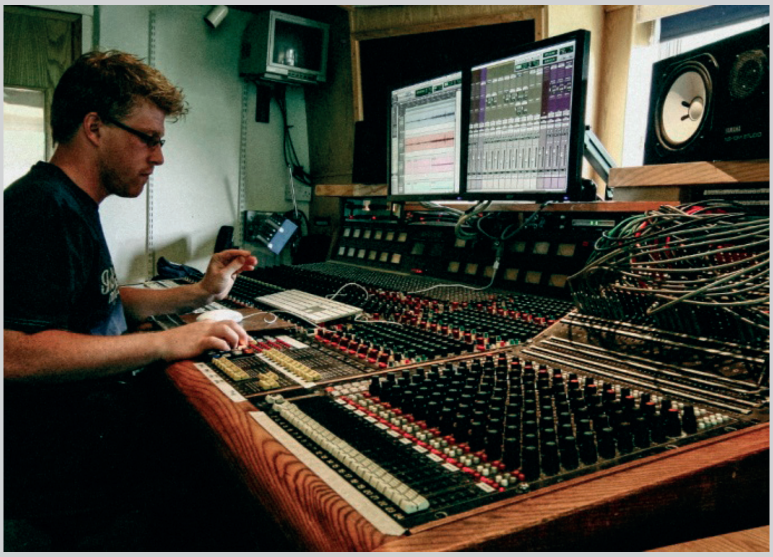
Company: Audiokinetic
www.audiokinetic.com

Audiokinetic's sound engine is optimised for multiple mobile platforms. Designed to be used by music and sound artists rather than programmers, the customisable layout allows devs to work efficiently on any project.

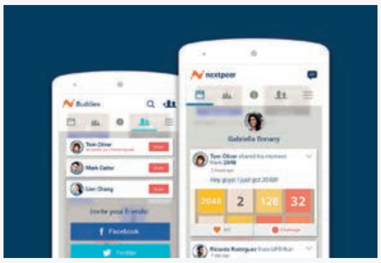
FMOD

Company: Firelight Technologies
www.fmod.org

FMOD is modelled on professional digital audio workstations, making it easy to use for both experts or newcomers to the discipline. Live in-game mixing allows devs to create and tweak music and sound while the game plays.



INFRASTRUCTURE, ENGAGEMENT & PRODUCTION



NEXTPEER

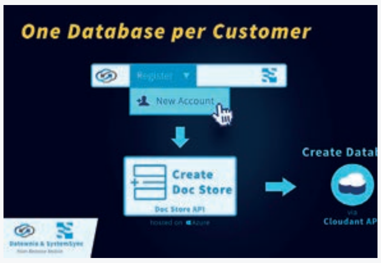
Company: Nextpeer
www.nextpeer.com

Recently acquired by mobile platform Viber, Nextpeer is a specialised SDK that helps developers add social and multiplayer functionality to their titles. Linking games to Nextpeer's network of players, the tech works across platforms and devs can even customise the interface to stay in keeping with their games.

GAMESPARKS

Company: GameSparks
www.gamesparks.com

GameSparks' cloud-based services allows mobile devs to add social functionality, multiplayer support and virtual economies to their titles. Custom analytics help them track player behaviour to work out the best ways to retain and grow their audience, and has been used in titles such as *Lara Croft: Relic Run*.



CLOUDANT

Company: IBM
www.cloudant.com

The IBM-owned NoSQL Database-as-a-Service uses the cloud to handle all the intricacies of database infrastructure and large amounts of concurrent users so devs don't have to. Studios can quickly prototype their games, and Cloudant will accommodate for any changes made. It can even handle sudden surges of popularity.

Dragon Story
CSR
START RACING!

PLAYHAVEN

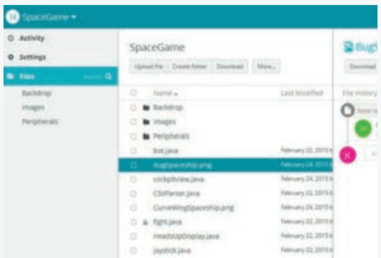
Company: RockYou
www.playhaven.com

This mobile monetisation and ad platform helps developers generate revenue from their games with full-screen interstitial ads and cross-promotions between their titles. The SDK can be downloaded for iOS and Android, or Unity and Unreal users can add the official plug-in.

BEE7

Company: Outfit7
www.bee7.com

Created by Outfit7, Bee7 offers devs a unique way to engage and retain users thanks to its gameplay reward system. Rather than receiving virtual currency and rewards for engaging with ads for other games, players are rewarded for not only installing but playing the promoted title.



PERFORCE HELIX

Company: Perforce Software
www.perforce.com

The new evolution of Perforce's Develop Award-winning versioning software, Helix not only helps devs keep track of their game's progress, but also adds new functions aimed at teams collaborating from around the world and security measures to detect threats to studios' precious IP.

COCOONJS

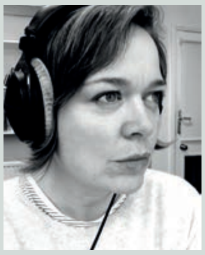
Company: Ludei
www.ludei.com/coccoonjs

Ludei's tool enables mobile studios to test, accelerate and monetise their HTML5 games, as well as deploy to all devices. It also allows you to debug your game directly via the target device, and a cross-platform JavaScript library holds the key to an underlying IAP system and advertisement SDKs.

HEARD ABOUT

Scoring the apocalypse

John Broomhall talks to The Chinese Room's Jessica Curry about creating music for the end of the world



Jessica Curry chose to use the sound of a choir to reinforce the central message of Everybody's Gone To The Rapture: when people come together in song, their differences are forgotten

What have been the most interesting challenges working on Everybody's Gone To The Rapture?

Rapture has been a steep learning curve for me. *Dear Esther* and *A Machine for Pigs* were much smaller both in terms of game length and overall scale – that's had implications for me both as studio head and composer.

The challenges ranged from humongous spreadsheets that would make an accountant hysterical, planning huge recording sessions, learning about mic placement, making good quality demos for Sony, writing the sheer amount of music needed, implementation, casting actors, VO recording – the list goes on.

Very early on, I decided to be explicit that I hadn't been through much of this before – and not be afraid to ask when I didn't understand something. People were very generous.

What did you learn from your celebrated work on Dear Esther?

The core lesson is that people are hungry for a strong, authorial, deeply musical voice. The score had no interactivity whatsoever but that didn't bother players: they responded to the music's emotional pull. Sometimes so much is made of the importance of dynamic scores, but I've heard a lot of music that's incredibly responsive but just so horribly bland.

My goal is to write music the player feels has been crafted just for them, but that also sounds like 'real' music not vanilla wallpaper. It's interesting, if you ask what my favourite film soundtracks are, I can reel off a dozen but I struggle to do the same with game OSTs.

We've a long way to go as music creators, and I include myself in that. But I'd rather give the player an emotionally satisfying experience than a technically clever one.

> ***"My goal is to write music the player feels has been crafted just for them, but also sounds like 'real' music."***
>
> Jessica Curry, Chinese Room

Can you talk about the music/sound design relationship and how they combine to serve the game?

They sit very closely together, dancing with, and feeding one another – a wonderful fusion encasing the player in an incredibly knitted-together sound world.

As well as the scored music, I worked with our sound designer Adam Hay to create an amalgam of procedural music and audio giving each player a unique musical journey. The procedural music I call the 'ghost echoes'. Carefully chosen music fragments are manipulated to provide a haunting, emotional experience.

I also loved working closely Dan [Pinchbeck, creative director] to weave narrative through the music. All six main characters have their own song and Dan wrote beautiful words that express the inner life of each protagonist.

What are you most pleased with from a purely personal viewpoint?

Many people that have heard the music in-game or the OST have started to cry a few seconds in. This is a game about what it is to be human, the connections that we form while we're here, how real people tackle the end of the world. I wanted the music to touch people very deeply.

One of the main reasons I used a choir was that it is a central and powerful metaphor for the message in the game. When people with different political, social and religious views, of different ages and race come together in song, their differences are forgotten instantly. The ability of group singing to create unity from disparity is a universally emotive and powerful phenomenon and this sums up what we are trying to say with Rapture. ■

John Broomhall is a game audio specialist creating and directing music, sound and dialogue
www.johnbroomhall.co.uk

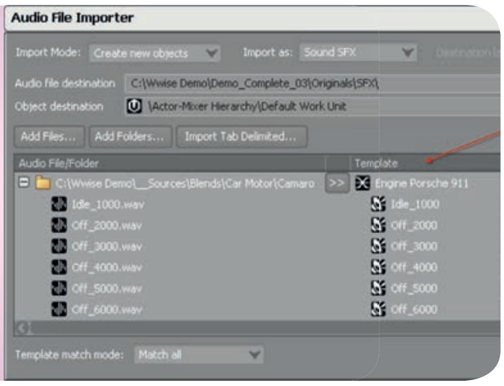
DEVELOP'S TOP TIPS

WWISE SECRETS

Audiokinetic offers up ten snippets of advide for how to get the most out if its sound engine and your game's audio

1 *Use Template Hierarchies*

You have 50 cars to create and they're all using the same model? Build a first car and fine-tune it until it's perfect. This hierarchy will be used as a template. Then, when importing the audio files for the other cars, simply reference your template during the import process and Wwise will automatically build the new cars using the same hierarchies and settings as your template.



Audio File Importer

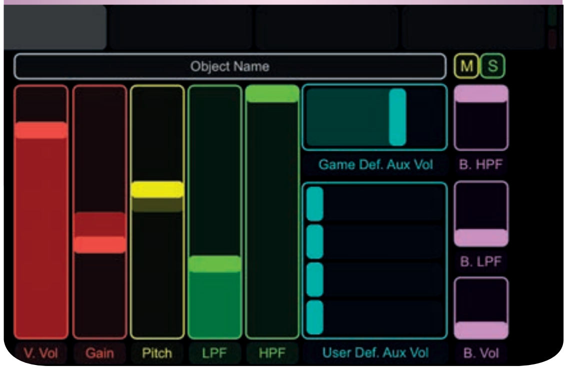
Import Mode: Create new objects
Import as: Sound SFX
Audio file destination: C:\Wwise Demo\Demo_Complete_03\Originals\SFX\
Object destination: \Actor-Mixer Hierarchy\Default Work Unit

Audio File/Folder	Template
C:\Wwise Demo__Sources\Blends\Car Motor\Camaro	Engine Porsche 911
Idle_1000.wav	Idle_1000
Off_2000.wav	Off_2000
Off_3000.wav	Off_3000
Off_4000.wav	Off_4000
Off_5000.wav	Off_5000
Off_6000.wav	Off_6000

Template match mode: Match all

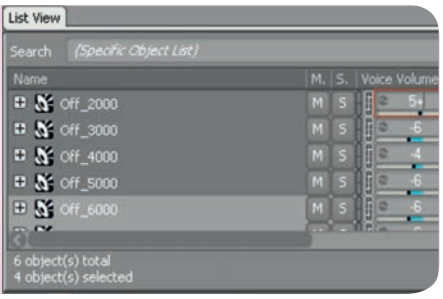
2 *Control Wwise from a Tablet or a Smartphone*

Wwise supports any controller using the Mackie or MIDI protocols. There are the obvious hardware controllers like keyboards and mixers you can use, but it's also possible to create your own workflow by controlling Wwise from a tablet or a smartphone with apps like TouchOSC or MIDI Designer.



3 *Keep Properties Offset in Multi-edit*

When riding the volume (or any other properties) up or down on a multiple selection from the List View or the Batch Rename, it's possible to keep the volume offset between the selected objects by placing the + or - operator after the number. For example, writing "5+" will raise the volume by 5 dB while preserving the objects relative offsets.

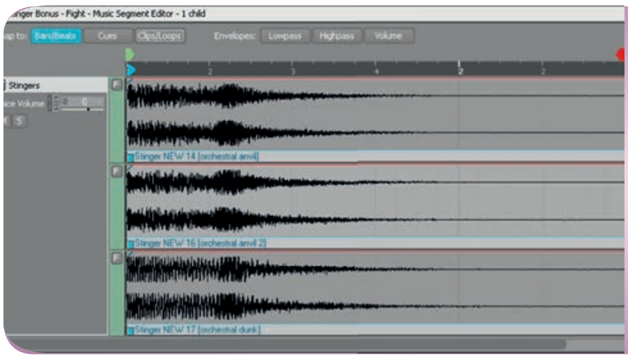


List View

Search (Specific Object List)

Name	M.	S.	Voice Volume
Off_2000	M	S	5+
Off_3000	M	S	-6
Off_4000	M	S	-4
Off_5000	M	S	-6
Off_6000	M	S	-6

6 object(s) total
4 object(s) selected


Stingers
Stinger NEW 14 (orchestral anvil)
Stinger NEW 16 (orchestral anvil 2)
Stinger NEW 17 (orchestral dunk)

4 *Randomize Stingers*

To get your stingers playing on top of the music using random audio clips each time they're triggered, simply set the track in the music segment used as the stinger to random, then create as many sub-tracks as you need.

5 *Create Line, Plane, and Volumetric Emitters*

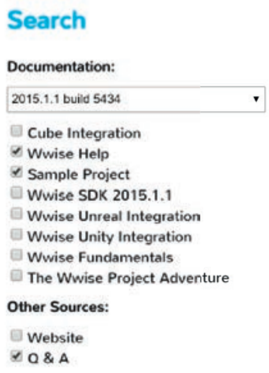
In the Wwise SDK, the SetMultiplePositions API lets you simulate line, plane, and volumetric emitters – such as rivers, lakes, or giant machines – playing just a single audio voice. This keeps codec decompression and streaming down to a single file, which helps in preserving hardware resources such as CPU, streaming bandwidth, and runtime memory.

6 *Simplify SoundBank Management*

In the Wwise SDK, the PrepareEvent, PrepareBank, and PrepareGameSync APIs are handy to avoid loading big SoundBanks with content that might not be necessary to the current scenario. These APIs allow you to load structures and media relevant to an event only. The dependencies are sorted out automatically and it avoids asset duplication at load time.

7 *Search the Documentation Online*

The Wwise documentation is now online, which often makes searches faster and easier than before. Some power users may use syntax like "Soundbank site:audiokinetic.com" in their browser to find any results related to SoundBanks in the Wwise Help, Q&A, and all the other Wwise documents, but it's often more precise to specify exactly where you want to search by selecting the relevant filters left-hand side.



Search

Documentation:

2015.1.1 build 5434

☐ Cube Integration
☑ Wwise Help
☑ Sample Project
☐ Wwise SDK 2015.1.1
☐ Wwise Unreal Integration
☐ Wwise Unity Integration
☐ Wwise Fundamentals
☐ The Wwise Project Adventure

Other Sources:

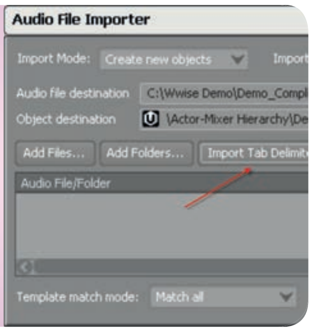
☐ Website
☑ Q & A

8 *License Wwise for Free*

For games using less than 200 sounds and for non-commercial projects, it's possible to license Wwise for free. For commercial games needing more than 200 sounds, there's also a royalty plan now available to equip teams with Wwise without affecting their production cash flow.

9 *Import Tab-delimited Files*

Import tab-delimited files to create any type of hierarchy and setting in Wwise. This feature is often used by studios migrating their audio content from other audio technologies to Wwise (provided that the created content can be exported as a tab-delimited file).



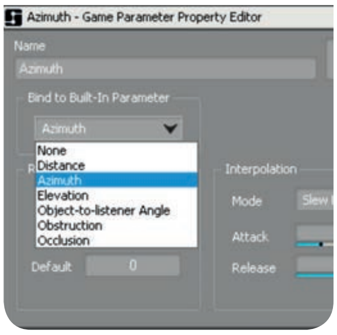
Audio File Importer

Import Mode: Create new objects
Audio file destination: C:\Wwise Demo\Demo_Compl
Object destination: \Actor-Mixer Hierarchy\De

Template match mode: Match all

10 *Use Built-in Game Parameters*

It's possible to create RTPC curves for a series of parameters retrieved from the game objects' and the listeners' positions without any dependencies on the game's code. It's also possible to set interpolation times to smooth out the built-in game parameters output.



Azimuth - Game Parameter Property Editor

Name: Azimuth

Bind to Built-In Parameter: Azimuth

Default: 0

With the range of devices out there – and the number of games that work across all of them – studios need to ensure they are testing with a multi-platform approach in mind

THE FUTURE STATE

Quality on every screen

VMC's **Kirstin Whittle** discusses how the multi-platform evolution is driving new QA protocols

WE ALL HAVE so many devices now – phones, tablets, desktops, consoles, even smartwatches and VR. It means there are many ways for users to engage with games and applications. This variety allows developers to attract and build a strong user base across multiple devices, but it is also driving changes to the role of QA in the product development process.

We all know that people expect a seamless playing experience. They want to remain immersed in the game world no matter what platform they're playing on. As the proliferation of options grows – more devices, on more platforms, with continual hardware upgrades – the complexity of the QA and production processes across multiple devices grows with it. These changes are creating the opportunity for stronger partnerships between developers and their QA partners.

MORE DEVICES, MORE DEMAND

Pundits like to predict how the emergence of one technology will be the death knell for another, but the reality is more complex.

While manufacturers and the media evangelise the latest consoles and devices, most users aren't upgrading with every new release. People get comfortable with their preferred interface or can't afford to upgrade as often as the manufacturers might prefer. Along with a range of platforms and devices, the QA process must contend with different generations of each.

With so many active platforms, ensuring compatibility (and backwards compatibility) for a multi-platform title requires access to a comprehensive inventory of relevant devices.

Yet for most companies, the limited frequency of need – initial launch and periodic updates – makes assembling a huge inventory of devices a very cost-prohibitive process.

> ***“Consistent quality requires holistic multi-platform QA, not individual projects specific to each device.”***
>
> Kristin Whittle, VMC

Working with a reliable QA outsourcing firm that owns and maintains a full range of the latest (and not-so-latest) devices allows developers to have their products fully tested on every version of their target operating system, device, and platform.

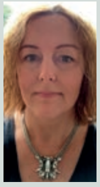
CONTINUITY ACROSS EVERY PLATFORM

You learn a lot while performing QA on a title – and that knowledge is crucial to the multi-platform QA and support process. Tight coordination between test teams on different platforms enables efficient cross-referencing of issues across different devices, in turn accelerating results and giving development teams more time to address bugs. This is especially valuable when deadlines are driven by release dates and marketing plans rather than development.

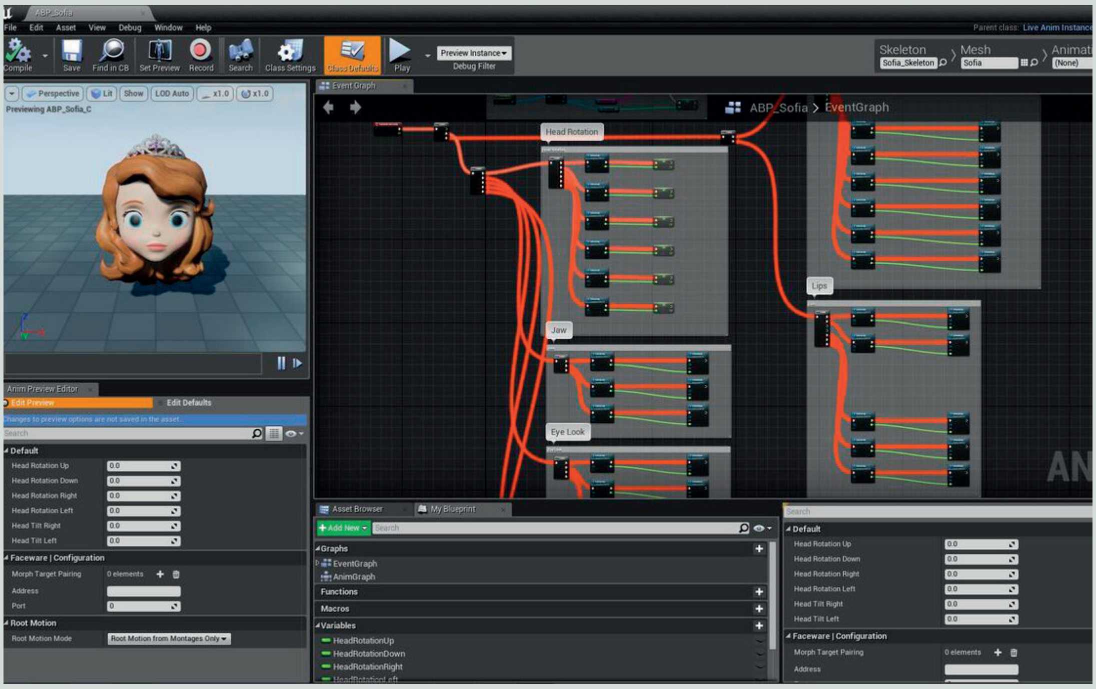
Here's the bottom line: Players want a great user experience, and delivering consistent product quality across everything from smartphones and tablets to desktops and consoles requires looking at the multi-platform QA process holistically, not as individual QA projects that are specific to each device.

Rather than running the risk of end-user disappointment by limiting the scope of your QA process, it is far better to choose a partner who can expertly handle every aspect of your multi-platform release strategy, including testing and localisation across a full range of devices, console compliance, and whatever else you need.

A well-executed QA strategy is essential to maximising both the efficiency of the process and the quality of the results. ■



Kirstin Whittle has 23 years of experience in the UK games industry and is one of *MCV's* 2015 Top Influential Women in Games. She manages business development in Europe for VMC.
www.vmc.com/games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Preview Instance
Debug Filter
Skeleton
Sofia_Skeleton
Mesh
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Head Rotation
Jaw
Eye Look
Lips
Anim Preview Editor
Edit Preview
Edit Defaults
Default
Head Rotation Up
Head Rotation Down
Head Rotation Right
Head Rotation Left
Head Tilt Right
Head Tilt Left
Faceware | Configuration
Morph Target Pairing
Address
Port
Root Motion
Root Motion Mode
Root Motion from Montages Only
Asset Browser
My Blueprint
Add New
Graphs
EventGraph
AnimGraph
Functions
Macros
Variables
HeadRotationUp
HeadRotationDown
HeadRotationRight

KEY RELEASE

Unreal animation

Faceware has released a UE4 plug-in for its Live technology, bringing its real-time facial animation to the engine's users

Facetime's Peter Busch praises the support his team has received from Epic Games and promises regular updates to the UE4 plug-in

FROM ITS DEBUT, Faceware Live has presented developers with a tempting option for their markerless facial animation efforts.

The solution lets games makers produce facial animation in realtime, streaming capture data into a middleware or engine that can immediately be applied to a character. Furthermore, the data can originate at any video source, whether it's Faceware's ambitious Pro HD Headcam System hardware or an ordinary webcam.

As of this month, the technology is available to UE4's legion of users.

"The Unreal Engine has long had a corner on the high end of realtime rendering," says Peter Busch, vice president of business development. "This high-quality capability will allow our customers to do even more ambitious projects. The support we have received from the entire Epic team has been absolutely fantastic. Our teams share a common understanding of the power of a realtime production tool."

As a result, Unreal users can now take full advantage of Faceware Live, and it's something Busch and his team are expecting to have an impact some way beyond the realm of games.

"In the short term, we see widespread usage in previz and virtual production," he predicts. "With the wave of upcoming rapid production needs beyond gaming, we see uses for episodic and online content. The most exciting market is broadcast television, for which we are already underway on our first live action and realtime character television series here in the States."

OPACITY SLICKER

When it came to building the plug-in, Faceware took the step of turning to an external company to assist them: the team behind the Kinect 4 Unreal plug-in work.

> **“Users can expect the power of Unreal and our tech will combine to create the content pipelines of the future.”**
>
> Peter Busch, Faceware

"This plug-in was co-produced by Opaque Multimedia out of Melbourne, Australia," Busch explains. "Opaque's strength is the ability to create a plug-in that is native to Unreal's Blueprint system and straightforward for UE4's user base. Having Opaque work on the integration also ensures a more rapid roadmap, since their business is designing outstanding plug-ins and keeping them up to date."

According to Opaque, it is the ease with which developers can access the data from the Faceware plug-in via the native Blueprint interface that is among the most significant factors, in that it should mean minimal time expended adapting to the interface for those familiar with Unreal.

And for Busch, there's another reason working with Opaque should enable Faceware users to do more with their titles.

"Their connection in the VR and AR space is particularly interesting for some of the more ambitious projects we want to do," Busch later adds, though he's remaining tight-lipped on more details.

FACING DEMOCRATISATION

Busch and his team are confident the plug-ins will be well served, regardless of their size and scope.

"Individuals and studios are always looking for ways to cut costs and speed up production," Busch offers. "Users can expect that the power of Unreal and the cutting edge tech of Faceware will combine to create the facial content creation pipelines of the future."

Faceware Live's arrival on UE4 should only contribute to the democratisation of mo-cap technology. And for those that use Unreal, having a markerless, camera-agnostic real-time facial animation system at their disposal should allow them to embrace that very trend. And whatever else Faceware and Opaque have in store should be ripe with potential. **www.facewaretech.com** ■

UNREAL DIARIES

World class

Animated short film 'A Boy and His Kite' honoured at SIGGRAPH with Best Real-Time Graphics and Interactivity Award

A Boy And His Kite was built as a demo of Unreal Engine's open-world capabilities, but it's also causing a stir in the film-making community

AT GDC 2015, Epic Games unveiled a new real-time demonstration built to showcase Unreal Engine 4's open world features and advanced rendering muscle.

Directed and produced by Epic's Gavin Moran and Kim Libreri, respectively, *A Boy and His Kite* shows a boy's journey through picturesque mountains, rivers and forests – a lush terrain spanning 250 square kilometres, beautifully generated with UE4.

While the movie efficiently highlights the engine's support for diverse topography and photoreal environments, it truly shines through an emotional storyline in which the theme 'If you love something, set it free' takes on a dual meaning.

During SIGGRAPH, Epic's Nick Penwarden presented *Kite* during the event's Real-Time Live! showcase. At the end of his demonstration, on behalf of Epic, Penwarden accepted the award recognising *Kite* for Best Real-Time Graphics and Interactivity.

UPCOMING EPIC ATTENDED EVENTS

Immersed Europe
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Oculus Connect
September 23rd to 25th
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IndieCade
October 22nd to 25th
Culver City, California

*Email **licensing@epicgames.com** for appointments and sign up for Epic's newsletter at unrealengine.com.*

Kite also appeared in the SIGGRAPH Electronic Theater and the Electronic Theatre Daily Selects. Only two of the 133 films at the show were screened in both programmes.

FREE FOR ALL

Epic recently released the full open world demo and the *Kite* cinematic for free through the Epic Games launcher to help devs take advantage of UE4's photoreal capabilities and support for massive environments.

Realistic landscape springs to life with dynamic direct and indirect illumination, cinematic depth of field, high-quality motion blur and procedurally placed trees and foliage, all rendered in real-time.

The Unreal Engine 4.8 release notes provide a deep dive on the sheer scope and size of the gratis release, and 4.9 brings even more high-end bells and whistles at no charge.

"We're inspired by the possibilities at hand with the convergence of film and games. *A Boy and His Kite* is proof that characters and worlds rendered in real-time can stand out amongst live action and pre-rendered performances," said Epic's Dana Cowley on the Unreal Engine blog.

As such, *A Boy and His Kite* is making the rounds at animation and film festivals.

Recent stops include the NYC Downtown Short Film Festival in New York, where *Kite* received an honourable mention award; Italy's Capalbio Cinema International Short Film Festival, which selected *Kite* for the Junior Kids Award; screenings in Brazil's Anima Mundi festival in both Rio de Janeiro and São Paulo; Italy's Castellaneta Film Fest; Kosovo's Anibar Animation Festival; and Italy's Imaginaria Film Festival.

New screenings of *Kite* are taking shape at the Fantouche International Animation Festival in Switzerland, where the cinematic is a Children's Program Finalist, and also at the DC Shorts Film Festival in Washington, DC.

> ***Kite is proof that films rendered in real-time can stand out amongst live action performances.***
>
> Dana Cowley, Epic Games

Kite is also shortlisted in the online-only Sploid Short Film Festival, for which voting is open through November 14th. With fewer than ten finalists, Sploid features one lone short film that is animated and rendered in real-time, created by a small team of people who make games.

Film-making – and, by extension, new media, including virtual reality – is on the cusp of a revolution. Through freely available tools and content, devs have unfettered access to technology that is setting into motion a sea change.

Epic maintains that anyone with a dream that can be realised in real-time 3D can use Unreal Engine to get there. ■

Epic is hiring. To find out more visit: **epicgames.com/careers**

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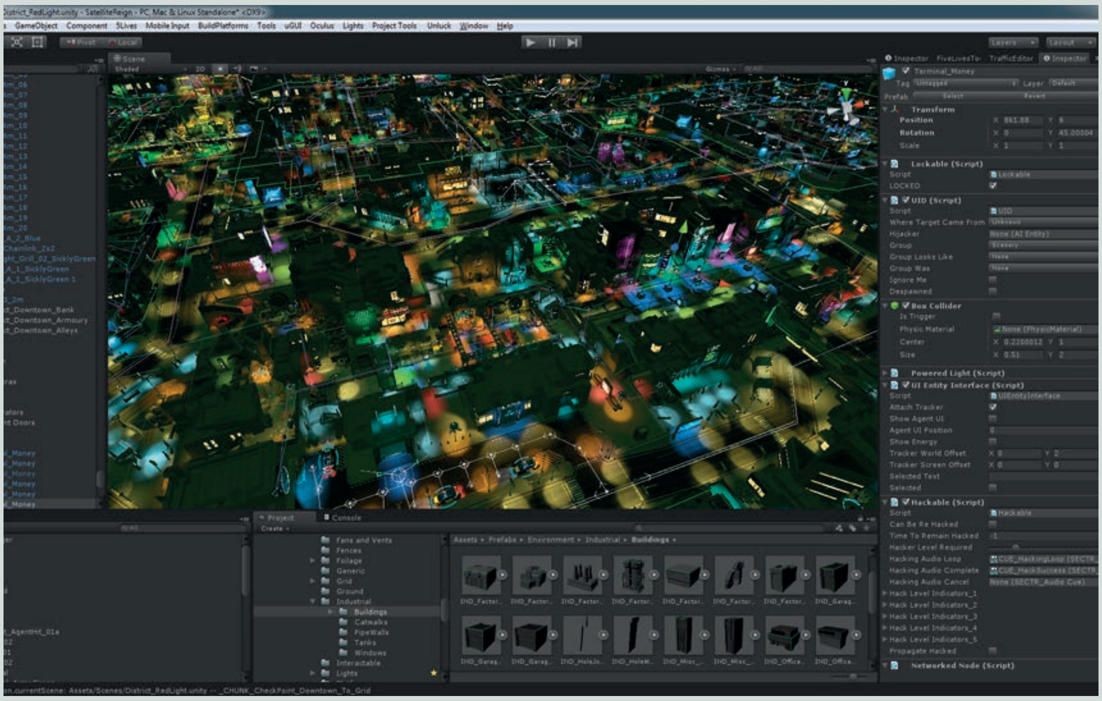

UNITY FOCUS

Building Satellite Reign

We speak to 5 Lives Studios about its Syndicate Wars successor and the engine powering it

5 Lives Studios not only used Unity to create the Kickstarter pitch materials for Satellite Reign, it also delved into the Asset Store to find tools that would help improve the look of the game

THE RISE OF indie studios has enabled long-running devs to revive classic franchises – albeit sometimes without the actual IP, often still retained by publishers. So while EA's 2012 *Syndicate* reboot may have flopped, members of the original team are keen to revive the sci-fi hit in the form of *Satellite Reign*.

Billed as a spiritual successor to *Syndicate Wars*, the title is yet another Kickstarter success, having raised £461,333 back in 2013. At the time of writing, 5 Lives Studios is preparing for the August 28th release, with a stint on Early Access raising hopes for the full title.

"This is our first game as an indie studio," said Brent Waller, environment artist. "The response so far on Early Access has been really positive, so we're sure people will really enjoy it. We hope it does well for us, but for now, we're trying to play it safe by keeping our expectations somewhat grounded."

Given the team's varying levels of experience with Unity on both personal projects, character artist Dean Ferguson says other engines "barely got more than a glance". In fact, Unity was used for more than just the game's development.

"All of our Kickstarter pitch cinematics and materials were created in Unity," he reveals. "Usually something like that would have been created with pre-rendered cinematics. Unity allowed us a high quality end result without the time sink of rendering."

The team also used the Asset Store and the work of other talented Unity developers to improve *Satellite Reign*.

Key assets included Candella SSR's Screen Space Reflections and the Alloy Physical Based Rendering shaders, which were used to create the game's rain-soaked cyberpunk streets. Others tools used include SECTR Complete, Final IK, DM Map, FavouritesTab Console Pro and Advanced Inspector.

> ***We were starting to hit a wall with Unity 4. Switching to Unity 5 allowed us to load more of the world at one time.***
>
> Mike Diskett, 5 Lives Studios

"The Asset Store has been invaluable to us," says animator Mitchell Clifford. "The amount of off-the-shelf scripts, effects and tools available is mind-boggling. We used many to help us achieve the gameplay and visuals we were aiming for.

"The man-hours and money saved by not having to develop these ourselves has been a life-saver for a small team like ours, and allowed us to create such a large game."

5 Lives Studios also chose to upgrade the game to Unity 5, released earlier this year. While the bulk of the work was done using Unity 4, the latest iteration of the widely-used engine enabled the team to bring an extra level of quality and polish to the final product.

"The biggest lure for us for Unity 5 was the 64-bit editor," says programmer Mike Diskett, who led the team behind the original *Syndicate Wars*. "We were starting to hit a wall with Unity 4 due to the size of our world, and the 64-bit editor for Unity 5 allowed us to load and have much more of the world in memory at one time.

"We also took advantage of Unity's new cloth system to give all our agents dynamic cloth on their trenchcoats."

Waller adds: "For us, the choice to move to Unity 5 was for performance. We were too late in development to take advantage of all the new rendering and lighting tech, as we had too many proprietary effects tied into Unity 4's deferred lighting system.

"Thankfully, Unity 5 has a legacy rendering option, which allowed us to retain all our custom shaders and effects with minimal porting required for Unity 5. The whole process of moving from Unity 4 to 5 happened over the course of one weekend with just Mike working on it." ■

Satellite Reign
Developer: 5 Lives Studios
Publisher: 5 Lives Studios
Formats: PC, Mac, Linux
www.satellitereign.com

MADE WITH MARMALADE

Why Toffee is sticking with Marmalade

James Batchelor finds out how the Earn To Die developer used the cross-platform tech to boost its latest title

Building the original Earn To Die with Marmalade answered a lot of technical questions for Toffee Games, encouraging them to continue using the cross-platform tool for its sequel

TOFFEE GAMES IS a mobile developer best known for its zombie-squashing vehicular action game *Earn to Die*. As work progresses on the sequel, the studio has embraced the benefits of using Marmalade's cross-platform tools.

"This is our second project made with Marmalade, so we already solved all technical questions while developing the original," says co-owner Ilya Kiryakin.

"Marmalade becomes better with each new version, and some workarounds we had to use for *Earn to Die* are no longer necessary. Our main challenges with *Earn to Die 2* were mostly related to game design, whilst Marmalade just did technical side of the work for us."

Key to Marmalade's appeal was its ability to run games natively without compromising performance.

"*Earn to Die 2* is a very dynamic game: lots of action happening on the screen at once, requiring lots of geometry and physics calculations," Kiryakin explains. "With Marmalade we managed to make this all working smoothly, and even have acceptable performance on low-end and outdated devices.

"One of our main reasons for choosing Marmalade is that it allowed us to continue using development tools which we were experienced with. We are experienced in C++ using Windows and Visual Studio, and we were happy that with Marmalade we don't need any other instruments to develop for mobile."

Another reason was the ability to continue using Toffee Games' own game engine developed in Action Script 3. Basing *Earn To Die* on this engine would allow the team to easily port between mobile and Flash, as well as bring across the established level editor.

"Marmalade C++ provides great flexibility, which allowed us to port our AS3 engine without many adjustments," says Kiryakin.

WORKING TOGETHER

Marmalade's compatibility extends to other tools as well. The Toffee team was able to use Adobe Flash to design its graphics assets, including a special custom built tool that renders Flash graphics as bitmap atlases. The team also developed a system to render hierarchical animated image structures with OpenGL, using Marmalade's IwGx module.

> ***"We focused on game design. Marmalade did the technical side of the work for us."***
>
> Ilya Kiryakin, Toffee Games

"This took a lot of effort," Kiryakin recalls, "but as a result we can now export all contents of multiple flash files, including animations, to a compact format and have it available in our game in just a few clicks.

"We also designed our GUI in Flash, and used the same approach to export it to the game. Marmalade is flexible enough to allow customised rendering by accessing OpenGL almost directly."

That's not to say development has been perfectly smooth. There are always challenges to overcome, and Kiryakin is keen to help fellow Marmalade devs avoid them.

"Pay attention to Marmalade's memory heaps," he says. "Our main working heap is just 16MB in size. For loading huge texture atlases during the game start-up we use a separate heap. After all atlases are loaded, we destroy this heap, so it doesn't consume memory white the application is running.

"Also we made sure the size of this separate heap depends on the device's screen resolution, and hence on the size of assets being loaded. This approach helped us to make sure that the game will use minimally necessary amount of RAM across various devices."

For new Marmalade developers, the Toffee Games co-owner points to the various example games supplied with the tool, which range from small applications showing basic functionality to a simple karting game.

"Start to learn Marmalade from checking example projects, and deploying it to your mobile device," he says. "These examples can provide some good overview of how Marmalade works. This is also a pleasant experience to see how you can deploy your application to mobile device from Microsoft Visual Studio in just a few clicks and a couple of minutes." ■

Why Marmalade Matters:
C++ compatibility enabled Toffee Games to port its own engine to Marmalade, while native performance allowed the studio to target a broad range of devices.
www.madewithmarmalade.com

15 October 2015

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Mike Hayes, Mercia Technologies

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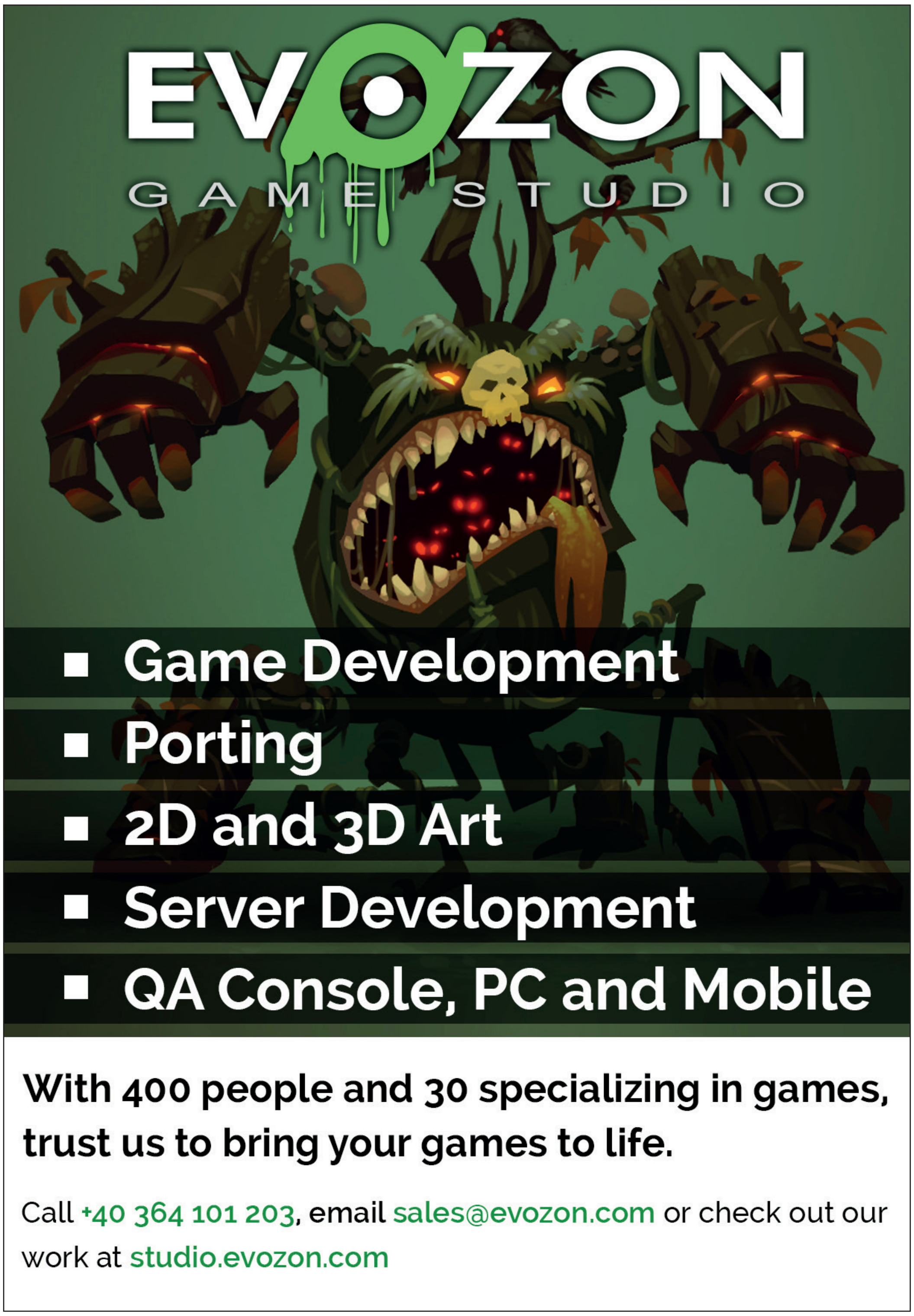

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AUDIOMOTION SPECIALISES IN offering services for motion capture and full performance capture. This includes real-time previs using the game environment – meaning users can see a live feed from the actor driving the game character in-engine or via Motiobuilder and a virtual camera giving the director the ability to frame shots and block out scenes.

It also provides audio recording and head-mounted cameras for facial capture with or without markers, depending on a developer's preference. It offers other unique services, too.

"We have stunt riggers who can provide all the flying through the air you need and the ability to drive vehicles straight on to set," explains Audiomotion operations director Brian Mitchell (*pictured far right*). "We also offer scanning, motion control and green screen services."

It's a selection of offerings that saw the firm's team take home this year's Develop Award for Services, as voted for by games industry peers. And it's not just in games, where it provides its mo-cap facilities and tech to indies and triple-A developers and publishers such as EA, Activision and Microsoft; Audiomotion has also worked on big-budget feature films through to the arts and other independent projects.

Mitchell says one of the main pulls for Audiomotion is the large capture space it provides studios and performers.

> ***"We have stunt riggers who can provide flying and the ability to drive vehicles straight on set."***
> Brian Mitchell

"For those who have small systems, they're generally compromised on the capture space," he states. "We offer a huge capture area with lots of height too. It's very difficult and time consuming when you have to break up shots then try and piece them together after the event. It's so much easier to spend a whole day capturing 15 minutes of animation with a professional crew who can assist in the production and deliver the solved data in a matter of days."

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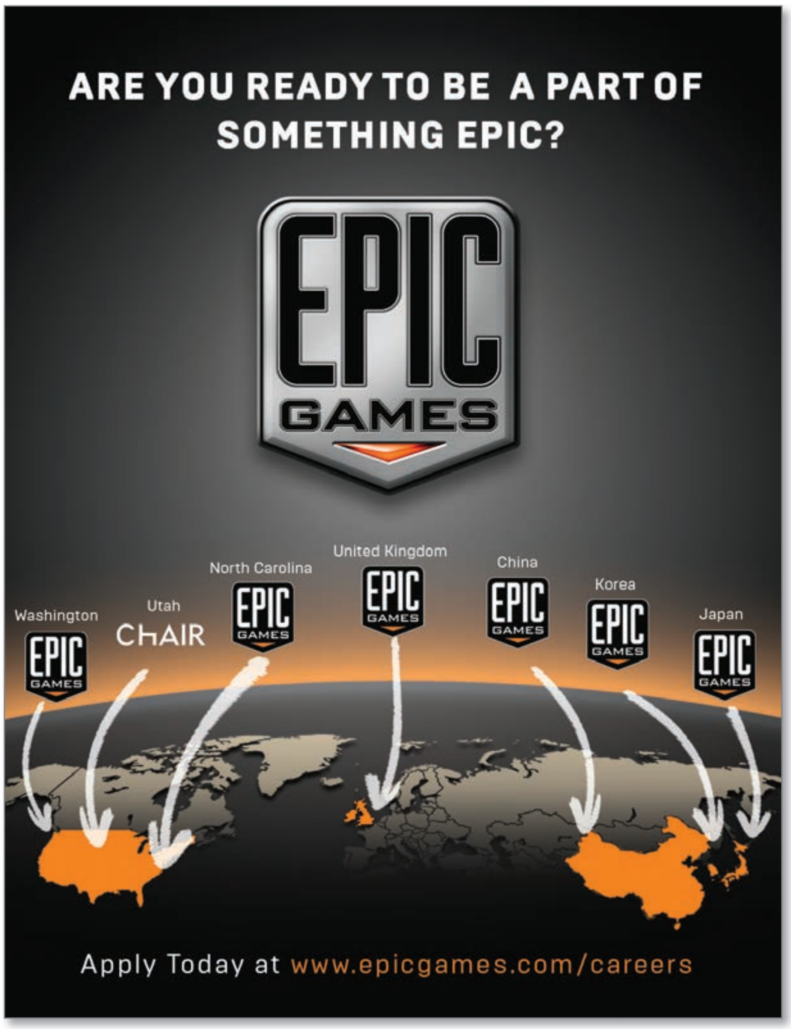
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> ***The crossover between television, film and video games is increasing.***
>
> Brian Mitchell

Audiomotion has worked on a variety of different projects with unique requirements. Work on Remedy's upcoming *Quantum Break* saw the studio recreate a scene involving collapsing floors and actors dangling from railings. It has also worked on *Alien: Isolation*, *Dying Light*, *FIFA* and *PGA Golf* and the *Call of Duty: Advanced Warfare Exo Zombies* trailer.

"Working on this [*CoD*] trailer was a privilege," says Mitchell. "The director made full use of the 24 meter capture volume when running to the helicopter in one take. We also constrained the camera view to the actor's head to enable the director to previs the shot during the capture."

Audiomotion has plenty more services lined up as it looks to the future. It is currently growing its business to incorporate more TV and film clients. Its two additional stages that house a 10m x 5m green screen and motion control rig have already been used for an animated feature and a couple of TV productions.

"The crossover between TV, film and games is increasing which means we are always looking to merge some of the benefits from one to the other," says Mitchell. ■

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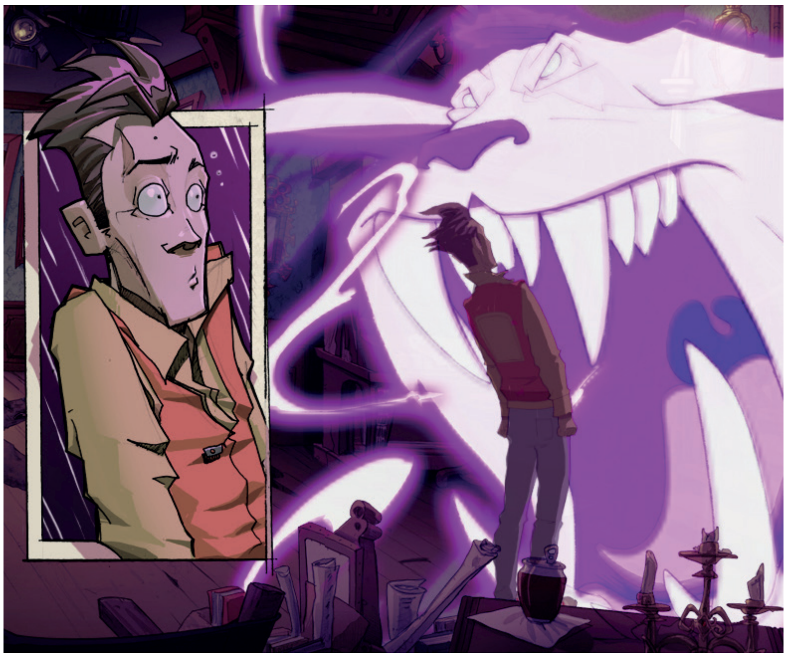
TOOLS SPOTLIGHT

This month: **Godot Engine**



Godot is used in visually stunning projects such as The Interactive Adventures of Dog Mendonça & Pizzaboy

THE GODOT ENGINE was originally developed as an in-house tech platform at Okam Studio. And in 2014, after years of work, the team made the tool kit open source.

The tech is available to use under MIT licensing. It's completely free and comes with no royalty fees. It's an engine that's been used in games such as *Mystery Team* – the first published game from the engine, *Ultimo Carnaval*, *Little Shadows* and Okam's own Kickstarter-backed *The Interactive Adventures of Dog Mendonça & Pizzaboy*. And it's been used by studios ranging from two to three people up to as many as 30 staff.

Okam co-founder Ariel Manzur says its accessibility means it is often harnessed to power titles from popular game jams.

As well as working for others, going open-source also solved the studio's own challenges of developing an engine without extensive resources to fall back on and finance it.

"Being open-source solves the problem of the 'business model', or at least makes it more accessible to us," says Manzur. "We didn't really have the resources to raise money and run a business around an engine. Being open source puts that in a completely different perspective. Initially we were planning GPL and commercial licenses, but later we settled for MIT licensing."

Godot can be used to develop both 2D and 3D games for platforms including iOS, Android, Windows, Mac, Linux, PS3 and Vita. The tool has its own GUI library, animation system for 2D or 3D characters, a custom physics engine and it also allows developers to add custom behaviours to any object by extending it with scripting. Manzur says the key to Godot is how the tools and workflow are designed to work efficiently with teams.

"We need to be efficient because we have less resources than other studios, and over the years we've worked with teams of different sizes, and learned a few things that influenced our design," she says.

> **“*Our priority is to build tools that can be used by artists, designers and animators.*”**
> Ariel Manzur, Okam Studio

Such lessons include the issue of complexity. Manzur says if a game reaches a certain level of complexity or uniqueness, it will need specific tools and systems for its creations, and it can be impossible to predict what those will be before starting a game. Okam's solution to this was to concentrate on making it easier to extend and create those tools.

Manzur also says the engine has been built to ensure tools can be used efficiently by all its users, whatever their profession, without time being lost on a programmer having to look after thousands of files.

"Our priority is to build tools that can be used by the artists, designers, animators, etcetera, to deliver content directly to the game, and be fully responsible for their creation," she says. ■

www.godotengine.org

STUDIO SPOTLIGHT

This month: **n-Space**

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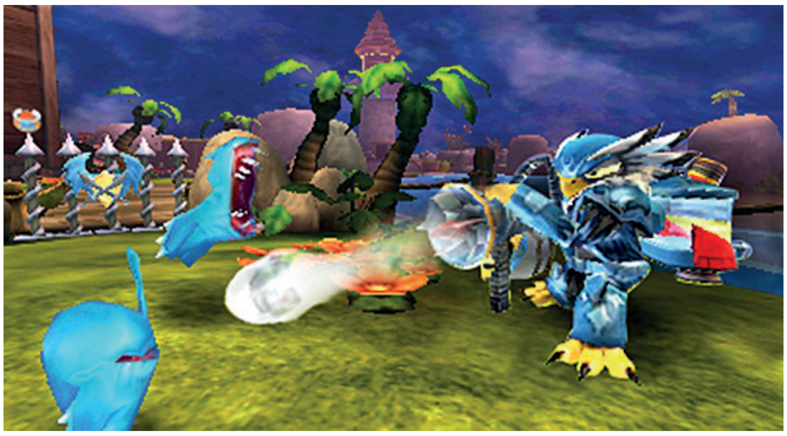
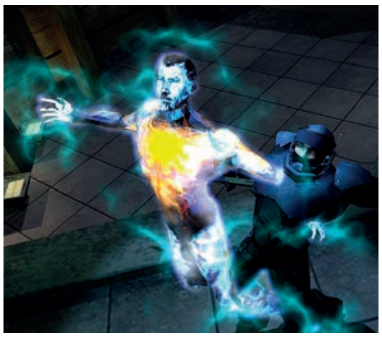
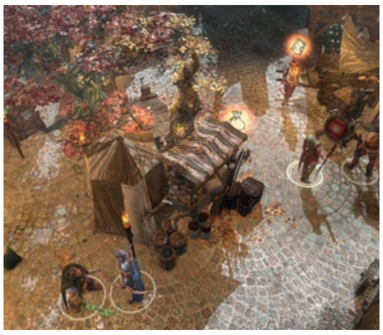


Having cut its teeth on work-for-hire projects like Skylanders (above) and Nintendo IP Geist (below left), the studio is now creating its own properties, starting with Sword Coast Legends (below right)





Tell us about your studio.
Dan O'Leary, CEO: n-Space is an independent game developer in based in Orlando, Florida. For over 20 years, we have provided concept-to-completion development services to most of the world's publishing community on virtually every platform since the PlayStation. In recent years, we have been pivoting the company away from the work-for-hire business model to co-funding and co-publishing games that we own and control ourselves.

What makes your studio stand out?
Tenacity. Living 20-plus years on a contract-to-contract basis is a noteworthy accomplishment. The company and our staff have faced some extremely tough challenges in that time, including seemingly impossible expectations, limited resources, economic uncertainty, and worse. Everyone here has made significant sacrifices in their time here, all because they love what they do and care for those they are doing it with. Those bonds strengthen and define n-Space in many ways.

What was the biggest development for n-Space over the last year?
2015 is one of the few times in n-Space history that the entire company was personally invested in a single goal: making *Sword Coast Legends* a critical and commercial success. I cannot overstate the energy and determination that comes from creating something that has the potential to make a difference – in the industry, the genre, the company and in the lives of our team members and their families.

What are you goals for the year ahead?
All of our goals and priorities are related to the successful release of *Sword Coast Legends* and supporting it afterwards with additional features and compelling content. *SCL* is a long term commitment for us, and release is just the beginning of something we hope to build on for years to come.

How does Sword Coast Legends differ from your previous projects?
After years of making games primarily for the benefit of others, this one is for us. n-Space is rightly proud of the very broad base of games we've created over the years. With a catalogue of over 40 titles in every imaginable genre, for every demographic, on every platform, our teams have delivered, almost without exception, on time and on budget while meeting or exceeding publisher expectations. But we've always wanted more for ourselves – more control, higher expectations, greater reward. Ownership.

How is the team drawing on their past experience for this title?
The average tenure at n-Space is more than seven years. During that time most of our employees would have shipped five or more titles, giving them a wealth of experience in every phase of development and a maturity that can only come from routinely delivering on time despite unreasonable expectations and limited resources.

Over the years, our teams developed a particular expertise in the broad action-adventure genre, and, as opportunities allowed, became more focused on RPGs and RPG-like games, including *Marvel Ultimate Alliance II* and *Heroes of Ruin*.

> ***"This is one of the few times in our history that the entire studio is personally invested in a single goal."***
>
> Dan O'Leary, n-Space

Into that mix we've added a wealth of world-class RPG DNA in hiring ex-BioWare leadership. Dan Tudge, the director of *Dragon Age: Origins*, joined us in 2012 as president. He was joined by Ross Gardner, long-time BioWare technical director and Jay Turner, narrative director from the same.

Recently, Brent Knowles, best known for his lead designer credit on *DA:O*, has also made major contributions to *SCL*'s development. Together the team draws on a wealth of relevant knowledge and experience to make *Sword Coast Legends* a memorable gaming experience.

How will SCL's success affect the future direction of the studio?
The economics of co-publishing are so radically improved over the work-for-hire business model that even a moderately successful *Sword Coast Legends* release would provide much greater stability at n-Space. If sales meet our conservative estimates, it will be completely transformative.

Tell us something no one knows about your studio.
We try to have few rules, but several policies had to be rolled out in 2008 due to injuries and dangerous situations. n-Space does not allow: hacky sack – only a game dev could be injured and create a worker's comp claim doing this; playing with snakes – red and yellow, kill a fellow, i.e. that's not a king snake; or airsoft guns – you'll put your eye out. ■

GAME DEV FAMILY TREE

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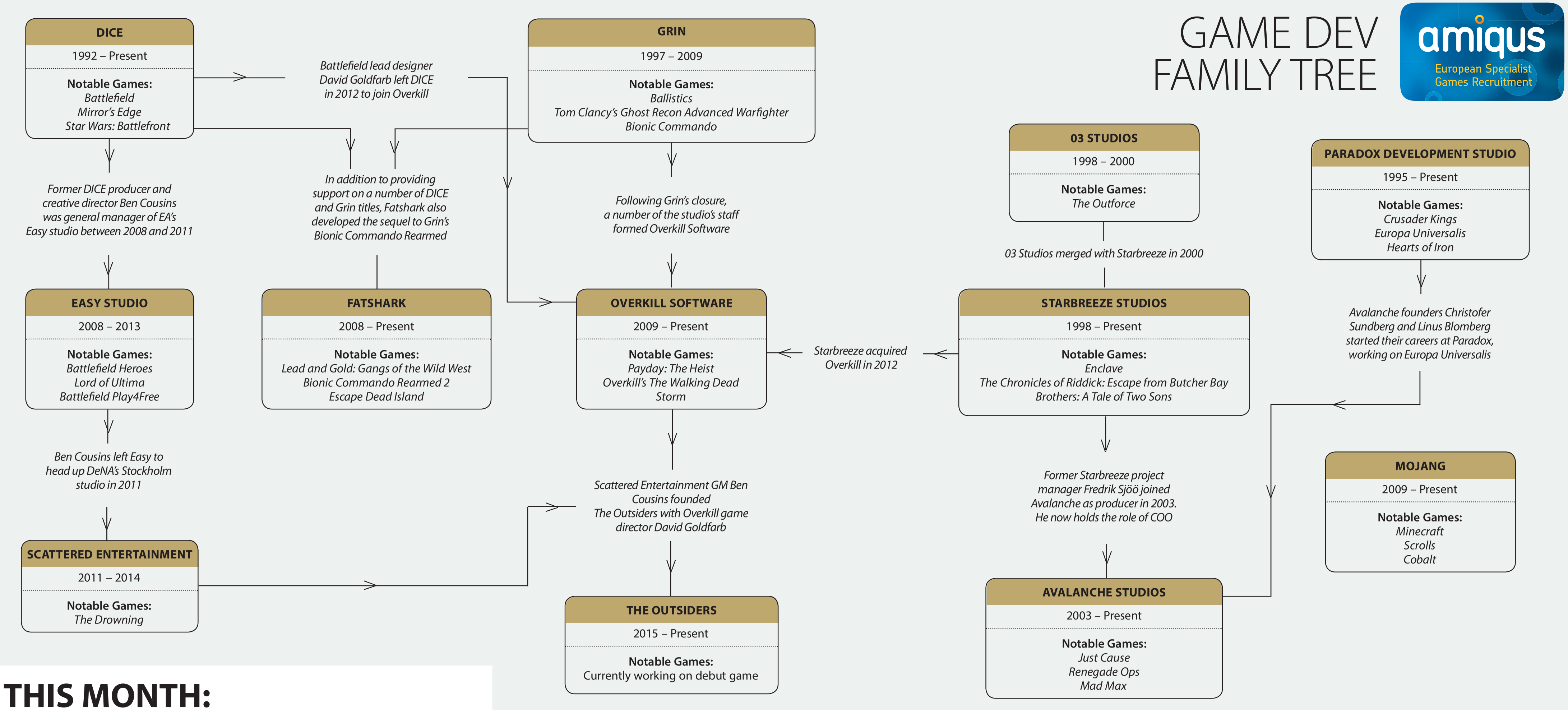

DICE
1992 – Present
Notable Games:
Battlefield
Mirror's Edge
Star Wars: Battlefront

Battlefield lead designer David Goldfarb left DICE in 2012 to join Overkill

GRIN
1997 – 2009
Notable Games:
Ballistics
Tom Clancy's Ghost Recon Advanced Warfighter
Bionic Commando

03 STUDIOS
1998 – 2000
Notable Games:
The Outforce

PARADOX DEVELOPMENT STUDIO
1995 – Present
Notable Games:
Crusader Kings
Europa Universalis
Hearts of Iron

Former DICE producer and creative director Ben Cousins was general manager of EA's Easy studio between 2008 and 2011

In addition to providing support on a number of DICE and Grin titles, Fatshark also developed the sequel to Grin's Bionic Commando Rearmed

Following Grin's closure, a number of the studio's staff formed Overkill Software

03 Studios merged with Starbreeze in 2000

Avalanche founders Christofer Sundberg and Linus Blomberg started their careers at Paradox, working on Europa Universalis

EASY STUDIO
2008 – 2013
Notable Games:
Battlefield Heroes
Lord of Ultima
Battlefield Play4Free

FATSHARK
2008 – Present
Notable Games:
Lead and Gold: Gangs of the Wild West
Bionic Commando Rearmed 2
Escape Dead Island

OVERKILL SOFTWARE
2009 – Present
Notable Games:
Payday: The Heist
Overkill's The Walking Dead
Storm

Starbreeze acquired Overkill in 2012

STARBREEZE STUDIOS
1998 – Present
Notable Games:
Enclave
The Chronicles of Riddick: Escape from Butcher Bay
Brothers: A Tale of Two Sons

Ben Cousins left Easy to head up DeNA's Stockholm studio in 2011

Scattered Entertainment GM Ben Cousins founded The Outsiders with Overkill game director David Goldfarb

Former Starbreeze project manager Fredrik Sjöö joined Avalanche as producer in 2003. He now holds the role of COO

MOJANG
2009 – Present
Notable Games:
Minecraft
Scrolls
Cobalt

SCATTERED ENTERTAINMENT
2011 – 2014
Notable Games:
The Drowning

THE OUTSIDERS
2015 – Present
Notable Games:
Currently working on debut game

AVALANCHE STUDIOS
2003 – Present
Notable Games:
Just Cause
Renegade Ops
Mad Max

THIS MONTH: STOCKHOLM

Lee Bradley charts the connections between the studios of Stockholm, one of the world's leading games hubs, that includes the world-famous DICE, Mojang, Avalanche Studios and more

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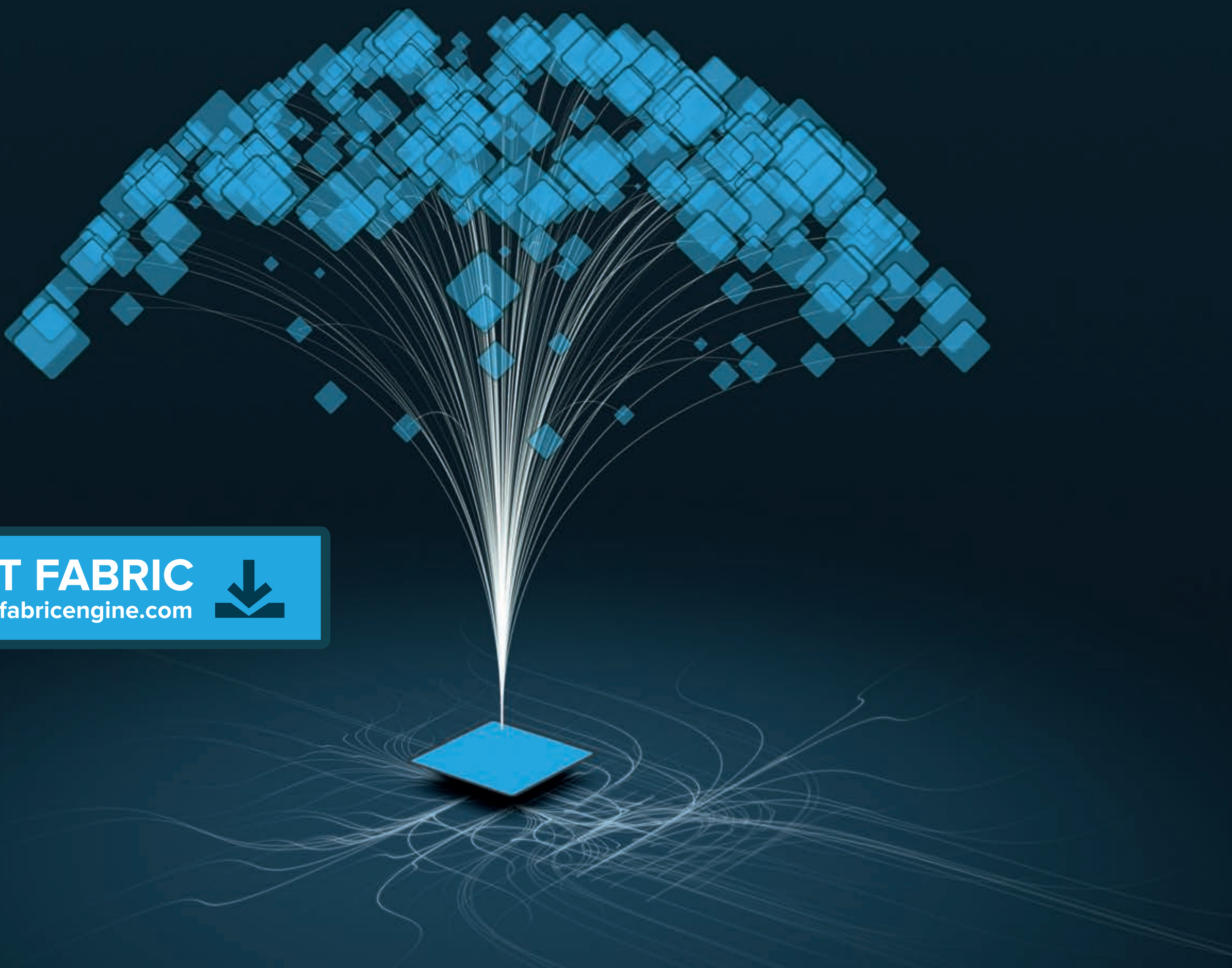
Printed by Pensord, Tram Road, Pontllanfraith, NP12 2YHA

Subscription UK: £35 Europe: £50 Rest of World: £70
Enquiries, please email: dev.subscriptions@c-cms.com Tel: 01580 883 848

Charges cover 11 issues and 1st class postage or airmail dispatch for overseas subscribers
Develop is published 11 times a year, reaching 8,000 readers throughout the UK and international market



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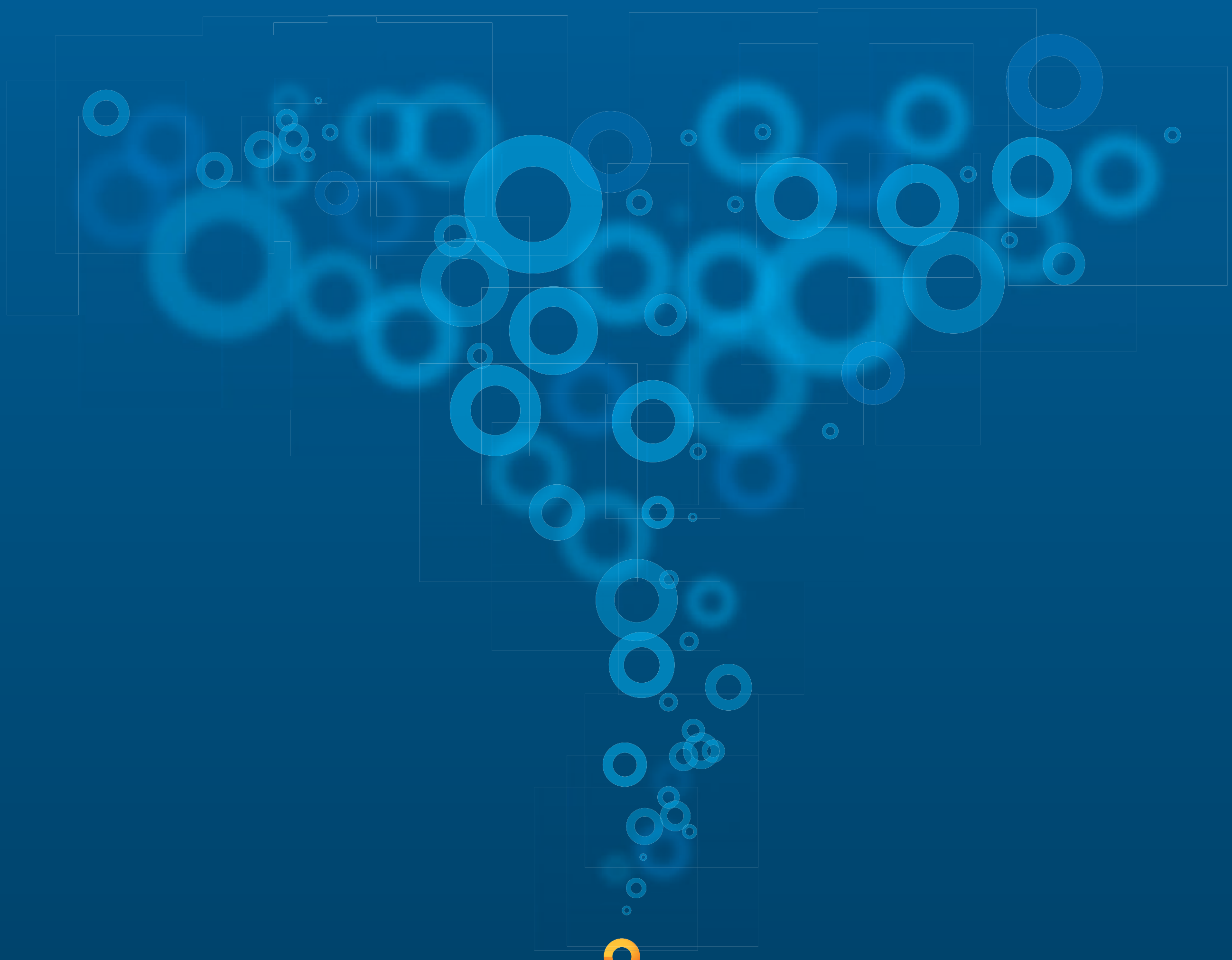

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